



photo credit: Leahy and David King  
Harvesting Earth Education Farm  
Flint

# FARMtoFOOD

## Passive Solar Systems

### PASSIVE SOLAR SYSTEM PROGRAM

The Michigan Economic Development Corporation and the state of Michigan are now offering financial support to farmers and non-profits for passive solar systems (also known as hoop houses, high tunnels, passive solar greenhouses or unheated green houses) and other energy efficiency, renewable energy (EE/RE) related equipment for agricultural related operations.

*Applications are now available.*

Locally grown fruits and vegetables are in high demand. As a result, increased economic opportunities exist for farmers to extend their production period 10 to 12 months without additional supplemental heat or light through the use of cutting-edge hoop house technologies, also known as passive solar systems<sup>1</sup>. Devoid of such technologies, production and sales periods are limited to less than seven months in many areas and as few as four or five months in more northern regions of Michigan. However, the use of passive solar systems have the potential to create more viable Michigan farms by increasing farm gate sales and product availability.

A recent on-farm research project<sup>2</sup> conducted on 12 private farms by Michigan State University showed that passive solar systems can generate gross and net sales at a rate that would generate a positive return on investment. Unfortunately, many traditional agricultural lenders are not familiar with this new technology making capital hard to come by. To help address this critical shortage of funding, a program has been developed to make funding available to Michigan farmers interested in using passive solar systems.

### BENEFITS OF PASSIVE SOLAR SYSTEMS

- Extends growing season by three to four months
- Protects plants from harmful weather conditions, pests and diseases
- Decreases pesticide usage
- Increases potential for crop diversity
- Quick return on investment
- Typically no permits needed
- Sturdy, low-maintenance structures

### ELIGIBILITY CRITERIA

**Eligible projects:** Purchase of passive solar systems and other energy efficiency, renewable energy (EE/RE) related equipment for agricultural related operations.

**Loan terms:** Interest on approved loans is fixed at 4.0 percent for a maximum of six years with interest only payments for the first six months of the loan.

**Eligible applicants:** Family farms, non-profit organizations and educational institutions. The USDA definition of a family farm considers the following: that the farm produces agricultural commodities for sale in sufficient quantities so that it is recognized as a farm; and the farm has both physical labor and management provided.

The Farm to Food Program is operated by partnership of the Michigan Economic Development Corporation (MEDC), Michigan Department of Agriculture (MDA), and Michigan State University (MSU).

Borrowers approved through the program will receive training from MSU in the installation and use of passive solar systems. MSU will also assist in the process of selecting passive solar systems and related equipment/materials.

To download an application, please visit the website at [www.MichiganAdvantage.org/PSS](http://www.MichiganAdvantage.org/PSS).

<sup>1</sup> A passive solar system is a season extending structure typically constructed with a metal frame, covered by poly-film with one or two layers of inflated 6-mil polyethylene that is passively ventilated, and designed with the intent to grow year round without supplemental heat or light.

<sup>2</sup> [www.mottgroup.msu.edu/uploads/files/59/Financing%20Farming%20in%20Michigan.pdf](http://www.mottgroup.msu.edu/uploads/files/59/Financing%20Farming%20in%20Michigan.pdf)