Passive solar Deep Winter Greenhouses: Winter production now possible in Minnesota through multiple DWG design options

Minnesota vegetable producers and the UMN Extension Regional Sustainable Development Partnerships have been collaborating on the development of passive solar Deep Winter Greenhouse (DWG) technology. Farmer partners adopted the previous DWG prototype that greatly reduces delivered heat requirements through the use of an underground rock bed thermal mass that stores and moderates solar heat gained from the steeply sloped glazing wall.

Researchers at the UMN’s Center for Sustainable Building Research will soon release an updated DWG design that responds to suggestions from farmers who wanted a lower cost and larger scale greenhouse. This structure will allow farmers to enter into winter production on a larger scale while minimizing startup costs with a design that borrows from the DWG 2.0, hoophouses, and passive solar greenhouses in use in China and Canada. This structure utilizes a south wall of rigid polycarbonate bent over a hoophouse frame while the North and edge walls are heavily insulated stick frame construction. Heat is drawn through a thermal mass of the farmer’s choice that is shielded from the cold through horizontal skirt insulation.

Join us to learn how to grow crops in winter and to learn more about this new DWG design.

Location: 33292 Goodhue Blvd Lake City, MN 55041

Attendance is free

RSVP at https://LakeCitydwg.eventbrite.com

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