

Solar hydronics keeping Ontario chickens warm

by Adam Freill

The thought of a nice warm floor on bare feet in the morning is a great way to sell hydronics, but the concept is not limited to the human species. Bruce Lindner, owner of Lindner Farms Ltd. in Perth East, Ont., has turned to hydronic heating for his chicken barn. And he's taken the concept even further, opting for a solar-based in-floor system for his birds.

"I went with the solar because I could not stand paying the propane bills," he says. "The bottom line is what does it cost, and what will it save? We are projecting



\$20,000 in savings per year, but I am hoping for more than that." "In-floor works well for poultry and hog farming," reports Calvin Ische, owner of Solar-Tech Hydronics, one of the companies involved with the project. "The temperature [of this system] is optimized for the birds, based on the mass of the birds."

The poultry are responding well to the new system. Unlike traditional chicken barns, where new chicks tend to flock together for warmth when introduced into the building, causing stress and possible deaths due to crowding, the chicks introduced into this barn spread out throughout the space, something that Lindner attributes to the even heat present on the floor.

With the even heat, Lindner no longer needs to use litter bedding used by most chicken farmers. "Initially, I thought I would need straw to keep them comfortable, but the floor was 104 degrees," he says. And an additional benefit for Lindner is the reduction in humidity in the barn, further reducing operating costs of his farm by reducing the ventilation requirements and the heat loss associated with that process. *ml*

AT A GLANCE

Barn Size: 300 feet by 80 feet

Heat required: 600,000 BTUH

Solar Arrays: 2 Copperhill containerized solar units

Temperature delivered to the floor: 120°F

Temperature at the floor: 100 to 110°F

Cost: In-floor heating system – \$90,000; Solar system – \$320,000

Subsidies: 25 per cent on solar component from federal government; possible further 25 per cent from province.

Payback: Seven to 15 years

Tubing used: 12,000 feet

Centres: 9"

Mature Chicken Size: 3.7 to 3.8 kilograms

Installing companies: Copperhill Solar, Solar-Tech Hydronics, and Calvin Ische Plumbing & Heating



solar-tech.ca
copperhill.ca

