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Close down growing space — and save money in winter

Many of the growers I've spoken with are planning to shut down some of their greenhouses during the coldest part of this winter. Once holiday plants have been shipped, there is a period when a considerable growing area may be empty before spring crops need the space.

This is a good time to clean up and make necessary repairs to the production facility. This downtime can also save considerable fuel. Between Dec. 15 and Feb. 15 is about one-third of the total heating season.

Fuel, labor savings

With greater availability of pre-starts and preplanted material, it may be less expensive to close some greenhouse space during the cold months and purchase material when it is needed to start production in spring. Besides the fuel savings, there is labor savings. Having preplanted material delivered when you are ready to restart greenhouse production is very convenient.

The procedure for closing a greenhouse is simple but should be followed so that the structure will weather winter storms and be ready for crop production when the spring growing season starts.

Closing a house

There are several steps to follow if you decide to close greenhouses for winter.

Greenhouse glazing. On polyethylene-covered greenhouses, check to see that the covering is securely fastened and fully inflated. Close tears and cuts with plastic mending tape to prevent more rips.

Clean the inflation blower. Check the pressure to see that it is operating at about ¼-inch water

static pressure. Excess pressure will stretch the plastic film. Under-inflation will allow the plastic to ripple in the wind and will create excess force on the fasteners. Also check to see that the inflation blower intake is free of debris and is located where it can't be blocked by snow.

Gutter-connected greenhouses are more difficult to shut down as snow can create overloading. It is best to turn the heat up when snow is predicted so that it will melt. Trying to melt the snow in the gutter area after it is full can require several days of heating.

If equipped with an energy blanket, keep the blanket open on snowy nights to allow more heat to reach the glazing to melt the snow. On other nights, the blanket can be closed to trap the heat received during the day.

Greenhouse structures. Check the integrity of the greenhouse structure. Bolt connections, collar ties, truss supports and purlins should be inspected and tightened if needed. Diagonal bracing should be securely in place as this keeps the greenhouse frame from racking end to end in a heavy wind.

Clean the area around the outside of the greenhouse so that heavy snow accumulation that could crush the sidewalls can be removed with a bucket loader or snowplow.

Heating systems. Most hoop houses are heated with hot-air furnaces, and they can be turned off without damaging the heating units. Fill propane tanks so that condensation is kept to a minimum.

In fuel-oil tanks, the remaining oil should be treated with an additive that will absorb moisture and make it more viscous. Fill the tanks

so that fuel will be available for emergency use should a heavy snowfall occur.

Shutting down a hot-water boiler is more difficult. The water must be drained and blown out of the boiler and piping. Most manufacturers do not recommend turning off boilers since the gaskets and seals may dry out and valves can corrode. It is better to fill the system with an antifreeze solution. An alternative is to lower the water temperature and operate the greenhouse at a minimum temperature (35°F-40°F).

Ventilation systems. Close motorized vents and shutters to keep the wind and snow from entering the greenhouse. Tape automatic shutters shut or cover them with plastic. This also allows the temperature to build up on sunny days for some solarization to control insects and disease.

Evaporative pad cooling systems should be shut down and cleaned. Drain pumps and tanks and clean pads and filters.

Irrigation systems. If there will be no heat in the greenhouses, the irrigation system should be turned off and drained. Any above-ground piping should be blown out with compressed air.

If there is a pressure tank, it should be drained to remove water and sediment. Leaks in the pipes should be repaired and filters and screens cleaned.

Perform maintenance

On sunny days, a greenhouse will warm to a comfortable working temperature. This is a good time to remove containers, weeds and other things normally found under the benches. Repairs or changes to the bench system can also be made.

Service the heating system. Besides having the furnace or boiler serviced, clean the heat distribution ducts or radiation. This will pay for itself in increased efficiency. Clean thermostats and check for accuracy.

Remove containers of pesticides and other liquids that could leak if frozen.

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