

THE COMING OF WINTER

Chemicals, irrigation systems and equipment must be carefully prepared to cope with sub-freezing temperatures in the northern U.S.

■ It's November, and winter is just around the corner, for those parts of the country that have such worries.

If you're anticipating snow, freezing temperatures and a general cessation of business in the coming months, you'll probably want to winterize the plants in your care to avoid low-temperature damage. However, just as important are chemicals, irrigation systems and equipment because they, too, can also be damaged by low temperatures and/or long storage. So here are some ways you can make sure you'll be ready to get back to work next spring.

CHEMICALS

Any properly constructed and approved chemical storage structure will provide protection for granules and dry formulations. Only a heated storage facility should be used for liquids.

Always try to plan your purchases so that you minimize the amount of material you might have to carry over to the next season.

Never store pesticides with food, feed, drugs or clothing.

Granules—Bags must be kept dry. Any opened bags remaining would probably be best used before winter. Open bags can allow active ingredient to volatilize and escape. Protect from extremely high temperatures. Try to cover the bags with a protective plastic sheet. Always store them up off the floor, at least on a pallet.

Wettable powders, dry flowables, dispersible granules—Protect from extremely high temperatures, moisture and direct sunlight. Some packaging could be damaged by water. Keep in clean, dry area out of sunlight, also off the floor.

Liquids—Whether they are petroleum- or water-based, liquids need to be protected from freezing conditions. Under low temperatures, the active ingredient can "salt out" or precipitate

and it may be difficult to get it back into suspension or solution. Worse yet, you may not realize that it precipitated and pour only carrier or highly concentrated active into your spray tank next spring. Freezing of water-based formulations could rupture the container.

Source: Doug Carlson, DowElanco

IRRIGATION SYSTEMS

Irrigation systems must be completely drained and shut down to prevent damage due to freezing water.

Golf course and large commercial systems need a high volume air compressor. To avoid damage to PVC pipes, use a length of 1½- or 2-inch galvanized pipe to dissipate the compressor heat prior to entering the irrigation pipes.

- 1) Close the main water supply valve.
- 2) Connect the air compressor (800 cfm or larger with pressure regulator adjusted to the lowest possible pressure, which will adequately remove water from the system).
- 3) Open drain valves and/or quick coupler valves at the far end of the system, maintaining air pressure on the system. The key is air volume (cfm) not pressure.
- 4) When all water has been drained, close drain valves and/or remove the quick coupler.
- 5) Activate each automatic valve manually from the controller, allowing each valve to remain on until all water has been expelled.
- 6) Electric valve-in-head and hydraulic normally closed systems need a minimum air pressure of 35 psi at the head to activate the valve and may require additional time to open.

Electro-mechanical controllers: Some are equipped with a heater resistor designed to generate heat within the timing mechanism compartment. In most areas of the country, where this heat will prevent condensation and rust formation, the AC power should remain on at the

controller while disabling the timing mechanism by placing the manual/automatic switch into the manual position.

Solid state controllers: Moisture can present a very costly problem. Due to varying climatic conditions, contact your distributor for winterization recommendations.

Source: The Toro Co.

VEHICLES

Battery—Remove the battery and clean it. Store in upright position. Maintenance-free batteries should be stored in a cool, dry place. Storage above 80 degrees increases self-discharge. If wet batteries are discharged, the electrolyte will freeze when stored below 20 degrees. The battery should be checked every 60 to 90 days and recharged if necessary.

Tires—Clean tires thoroughly. Tires should be checked at regular intervals and reinflated as necessary to keep them at recommended pressure. Store so tires are protected from the sunlight.

Radiator—If storing more than a few months, drain the coolant. Open cock at bottom of radiator and remove pressure caps to drain water completely. Leave cock open. Hang a "no water" note on pressure cap. Since water may freeze, it is very important no water is left in the machine.

Tractors with wing mowers—Store outrigger and wing units in the raised position. Tie mowers up to relieve strain on hydraulic system. Front and center units are stored in the lower position on blocks so weight is not on tires.

Source: Larry Evans, Lawn & Turf

ENGINES

- 1) Operate until fuel is completely consumed.
- 2) Drain the fuel from the tank, then backflush the in-line fuel filter.
- 3) While the engine is still warm, drain the oil from the crankcase and refill with fresh oil.
- 4) Clean the engine's exterior. Paint exposed metal or lightly coat with rust-preventive oil.
- 5) Store in dry and protected place.

Source: Larry Evans, Lawn & Turf