

GROWERTALKS

Features

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Heed These Heating Tips

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The summer is officially over and mum season is fully upon us, so it's a good time to start checking on your unit heaters to make sure they'll be ready for winter. Let's just hope that we don't have a winter like we did last year.

Greenhouse heaters have been through quite an evolution since more growers started to use them in the 1980s. The old-school versions, like gravity-vented heaters that use vent pipes, only have a 65% seasonal efficiency. Most of these aren't even produced by the manufacturers anymore.

"People have these gravity heaters and they have no idea how inefficient they are," said Pete Hummert, Greenhouse Sales & Design Manager for Hummert International, which sells greenhouse heaters. "If you look at a higher efficiency furnace like an Effinity, the stuff will pay for itself."

Newer models, like power-vented units and Modine's Effinity 93, are much more efficient and have longer shelf lives. The Effinity is even more efficient—19% more than power-vented heaters and 40% more than gravity-vented ones. There are also tax incentive programs available if you have these newer models. (Visit the Database of State Incentives for Renewables & Efficiency at <http://www.DSIREUSA.org> to see if your state offers tax credits.)

Here's a quick checklist for you to consider when you're preparing for winter. (For a complete checklist, visit www.modinehvac.com/web/Greenhouse/Greenhouse-Heating-Solutions.htm:

- Check equipment for any physical damage that may have occurred during the summer. This includes damage to sheet metal, fans and air movers, wiring, gas piping and vent system.
- Check the cleanliness of the heat exchanger and the burners.
- Make sure the vent system is clear (if you have one)—especially if there are birds living in your pipes.
- Make sure there aren't any obstructions that are blocking the air inlet or air discharge.
- Make sure the supports for the unit are secure and that it's hanging level.

For heat exchangers:

- Check for any signs of cracks or corrosion. Use a flashlight so you can see inside.
- If needed, clean the inside tube surface with a stiff brush. (Don't use a wire brush as it may scratch the

metal and make it more prone to corrosion.)

- Inspect it for signs of overheating. Metal that's been overheated will have a dark discoloration. If you see this, it may mean that the gas pressure is incorrect, air movers aren't adjusted properly, venting is inadequate, combustion air is inadequate or something is blocking the air inlet or discharge.

For gas burners:

- Inspect the burner for cleanliness. Use a stiff brush to clean it if necessary. Don't use a wire brush.
- Really look at the inside of the burner tubes as much as possible because critters like spiders or mice may be living inside them.
- Inspect the burner for the proper location to make sure that it's properly aligned and securely fastened.

For gas controls:

- Inspect all gas connections for good, tight fits—this includes pipe connections to the equipment, as well as pilot tubing connections at the gas valve and at the pilot burner.
- Make sure the main burner gas openings aren't blocked with spider webs. Also, check the pilot opening for obstructions if it can't be lit or won't stay lit.
- After a visual and physical inspection of the gas connection, turn on the gas and check for leaks using a water/soap solution.

For vent systems:

- Make sure the vent system is clear and free of any obstructions.
- Make sure all of the connections are secure and tight.
- Check the support system to make sure it's secure and hasn't been damaged.
- On gravity-vented products, make sure the blocked vent safety switch hasn't been tripped.
- Check the joints of the vent for signs of condensate leakage. Watermarks down the outside of the vent pipe may indicate inadequate venting and/or improper vent insulation in unheated spaces. Using double-walled vent pipe will reduce the likelihood of condensation in the vent pipe and will offer better venting.
- Check the vent pipe drip leg and cleanout cap. Clean them if necessary.
- Don't forget to use approved weather caps.

Need a brand new heater or want one that's more efficient? Go to www.hummert.com. **GT**