insideGROWER

WEB EXCLUSIVE

2/14/2023

Prevent Surprise Heating Repairs

Jamie Tuinstra

Commercial greenhouses play a vital role for consumers in the United States. Year after year, there is an increase in demand for a variety of vegetables and fruit year-round. According to <u>Business Wire</u>, the commercial greenhouse market was valued at \$9.2 billion in 2021 and is anticipated to expand at more than 8% compound annual growth rate (CAGR) from 2022-2027. With the ability to grow crops during the winter, commercial greenhouses are a staple to the economy.



For greenhouses to be successful during the winter, they need to have a reliable heating source. These heaters are the backbone of the greenhouse and help increase the growth potential for crops during the cold season. It's important to maintain these units to ensure there are no surprise breakdowns when they are needed the most. Being proactive before and after the heating season is an excellent way to ensure your unit is prepped and ready to operate once temperatures drop.

General Maintenance

As growers are preparing to shut their heating units down for the season, it's important to perform a quick check-up. A general inspection of the unit can help unearth any potential issues that may arise ahead of the next heating season. For safety reasons, it's important to inspect the heat exchanger to ensure there are no cracks or rusting and to make sure it is still intact. Growers or licensed professionals will also want to check the vent pipe for any rusting or blockages. Bird nests are common in vent pipes, so it's vital to clear any bird nests that may be blocking the component. Cleaning the burners on heating units is critical as well. For high-efficiency units, growers need to check the water traps and condensate lines for any dirt or debris. These quick observations will go a long way in preparing your unit for the next season.

Common Repairs

When heating units are used frequently, there is an increased chance that a repair will be needed eventually. There are two common issues that growers need to watch for that tend to be preventable. The first pertains to the flame sensor. Part of the pilot assembly, the flame sensor is a safety component that tells the control board that a flame is present within the unit. Over time, the sensor will get dirty. This is probably the No. 1 troubleshooting call technicians receive. Cleaning the sensor before and after the heating season can save growers several headaches.

Another common repair during the heating season pertains to the fan motor. In the greenhouse environment, fan motors tend to get dirty and grimy. In addition, wear and tear on the motor is increased when operating inside a greenhouse due to the increased moisture and use. Keeping them clean will help reduce the amount of maintenance required to keep the motor functioning properly.

Keep the Unit Clean

While all the componentry of a heating unit can fail at any moment, general maintenance and cleaning can help prevent many problems from occurring. As growers shut the units down for the year, simply taking the time to clean and inspect them will prevent future issues. No one wants to turn on a unit at the beginning of the heating season only to discover it doesn't function properly. Cleaning the unit at the beginning and end of the season will extend its life while also limiting the number of nuisances and surprise repairs for growers.

Jamie Tuinstra is a product manager at Modine Manufacturing. He has been in the heating and cooling industry for 25 years and with Modine for 16. Building on more than 100 years of excellence in thermal management, we provide trusted systems and solutions that improve air quality and conserve natural resources. More than 11,000 employees are at work in every corner of the globe, delivering the solutions our customers need, where they need them. Our Climate Solutions and Performance Technologies segments support our purpose by improving air quality, reducing energy and water consumption, lowering harmful emissions and enabling cleaner running vehicles and environmentally friendly refrigerants. Modine is a global company headquartered in Racine, Wisconsin (USA), with operations in North America, South America, Europe and Asia.