Gas Heater Check List

This list was prepared last year by California extension specialists and comes to us through James K. Rathmell, Jr. of Pennsylvania State University. We have added to and modified it slightly.

1. **Clean accumulated dust and dirt** from around the burners. Pesticide dust and sprays might have accumulated during the summer months.

2. **Test and adjust the flame setting** in all heating units. The flame should be a clear blue color. A yellow flame usually indicates an improper air-gas mixture.

3. **Clear all gas jet holes** so maximum burning capacity is maintained.

4. **Protect all thermostats** and solenoid valve controls from condensate drip. Sometimes protective coverings are removed or jarred askew during the summer months and not replaced. At the time of the first rain, when drips and leaks are the most prevalent, water in the controls can cause serious malfunction of the heating unit.

5. **Make sure all gas heaters are vented** and that the vents are in proper working order. Improperly burned gas can develop carbon monoxide. The toxic level to humans is 50 ppm for an eight-hour exposure.

6. **Check all wire and pipe connections** for possible breaks, frayed insulation, or loose contacts. In addition ethylene gas can be present in the atmosphere of improperly vented heaters. It requires but a few parts per million of this gas to cause "sleepiness" in carnations.

7. **Be sure there is enough air** available for complete combustion of the gas on cold nights when much of the greenhouse cover is iced over. The best rule of thumb we have at this time is that 14 cubic feet of fresh air is required per cu. ft. of gas burned. Incomplete combustion not only causes carbon monoxide but releases considerable ethylene in the greenhouse as well. As little as 50 parts per billion of ethylene will reduce carnation flower life (possibly 35 ppb). Chronic exposure to these low levels of ethylene also causes shortened internodes, blasting or crippling of flower buds, and increased branching on the upper parts of flower stems. The symptoms are similar to boron hunger. Apical dominance of the terminal buds is lost or partially lost to produce these symptoms.

Your editor,

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