GROWERTALKS

GT in Brief

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Energy Code Change Could Affect Greenhouses

Chris Beytes

Might some future code official require a Miami garden center to install a closed-weave shade system in their greenhouse to retain heat?

That's the ridiculous scene envisioned by Matt Stuppy, president of greenhouse manufacturer Stuppy Inc. and a member of the National Greenhouse Manufacturers Association Board of Directors, that could come about due to recently approved changes to the International Energy Conservation Code (IECC). The change basically classifies a greenhouse roof as a skylight and the sidewalls as "vertical fenestration" (windows, doors and other transparent or translucent sidewall materials).

Matt, along with Paul Jacobson of curtain and covering manufacturer Green-Tek, has been serving on a task force to represent the greenhouse industry's needs to the International Code Council, the organization that writes building codes. He and Paul lobbied hard this past year to prevent some proposed changes to the energy code that would have required greenhouses to meet unrealistically high levels of energy efficiency. They thought they had succeeded, as the ICC committee recommended disapproving the changes, and the final action hearing also voted for disapproval.

But a vote by the ICC membership went against those recommendations and approved the code change. What it says is that the roof of a greenhouse that's mechanically heated or cooled would be required to meet a U-factor of 0.5 (low-energy greenhouses—those that use less than 3.4 Btu/hour are exempt—think perennial overwintering houses). That's the same U-factor a skylight is expected to achieve. Sidewalls get a slight break, needing only to achieve a U-factor of 0.7 (more on this below).

Matt says the code change was pushed by several groups, including the Energy Efficient Codes Coalition, which is made up of groups like the Sierra Club, the National Resources Defense Council and others. Their interest in greenhouses comes from the rapid growth (and high energy use) of vegetable and cannabis greenhouses and warehouses. Apparently, they've brought unwanted attention to our corner of the world.

What does this mean to you?

Most importantly, building codes aren't retroactive. An existing greenhouse won't have to meet the new code. But new construction would.

According to the Ball RedBook Vol. 1 (Greenhouses & Equipment), these are the various U values for greenhouse glazing (the lower the number, the better the efficiency):

• Glass (single layer): 1.1
• Single poly: 1.1
• Double poly: 0.7
• Twin-wall acrylic: 0.6
• Twin-wall polycarbonate: 0.6
• Double-poly w/energy curtain: 0.3 to 0.5

As you can see, no glazing hits the magic 0.5. Every sort of greenhouse would require an energy curtain to meet code. Even that may not technically be enough, seeing how an energy curtain only improves double poly by 0.2 to 0.4. And that doesn't mention sidewalls, which, if glass or single poly, won't meet the 0.7 U value requirement.

Which leaves us with that Miami greenhouse, where the biggest problem would be keeping it cool, not warm. Might some overzealous code enforcement officer require it to have an energy curtain anyway? It all comes down to where the code is adopted, how it's interpreted and whether it's enforced.

These codes come up for comment and revision every three years and NGMA will be evaluating whether it's feasible to fight on. **GT**