


# Genome Breakthrough Means IDM-Resistant Impatiens are Coming

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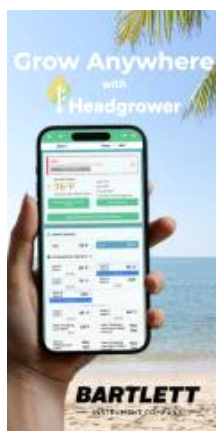
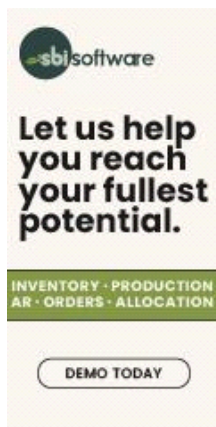
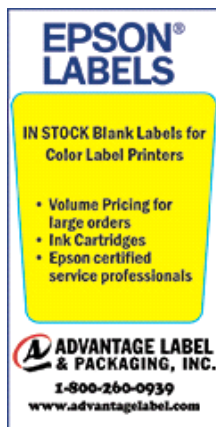
## COMING UP THIS WEEK:

Ball, KeyGene crack the code  
- When is it coming?  
Ray Greenstreet on 2018  
- Greenstreet's Green Walls  
NGB's new varieties listing  
BioWorks' organic fungicide  
800 pages of horticultural fun!  
Selecta One adds kalanchoes  
Finally ...

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**Ball, KeyGene have sequenced the impatiens genome!**



I don't know if I have ever put an exclamation point at the end of a headline before (especially one with the word "genome" in it) but this news might warrant it: Ball Horticultural Company and ag biotech company KeyGene have completed a two-year-plus project to identify all the genes of *Impatiens walleriana*—genome sequencing and assembly, it's called.

This "first-of-its-kind" project creates a very accurate tool that Ball says its breeders can use to find "new solutions to the industry in impatiens," according to the press release—which means, first and foremost, impatiens downy mildew (IDM) resistance. IDM is the disease that has decimated sales of impatiens worldwide since it first struck in 2008, taking the crop from the world's No. 1 annual down to an also-ran.

As you can imagine, there's plenty of scientific jargon associated with the breakthrough—things like long-read sequencing and marker/gene identification—but the bottom line is that this will let plant breeders use key plant genes in their breeding work—such as those that confer high resistance to IDM. Breeder Ruud Brinkkemper, General Manager of PanAmerican Seed B.V. in Venhuizen, the Netherlands, is the breeder taking on the IDM-resistant impatiens project. Stated Ruud in the release, "The sequencing and assembly of the *I. walleriana* genome has empowered me to better use the plant's genetic potential to unlock important traits through the use of traditional breeding techniques."



## When is it coming to a greenhouse near you?

Let's cut to the chase: What you want to know is, "When do we get an IDM-resistant impatiens?" The release is vague, stating only that PanAmerican Seed is "closer than ever."

How close is "closer than ever?" For the answer, I emailed Katie Rotella, Ball's Senior PR & Digital Manager, who was able to get me the following responses, penned jointly by Anne Leventry, President of PanAmerican Seed, and Matt Kramer, Research Director for Ball:

**Q: Based on this breakthrough, what are the odds we'll see an IDM-resistant impatiens series come to market, and when?**

*A: We anticipate introducing an IDM-resistant impatiens series that is the result of a great team effort involving our breeders, pathologists and product managers, along with our collaborators KeyGene. This has been a real team effort, working from the beginning to find a solution. The product is in development and performing to our expectations. Timing of introduction is still under consideration.*

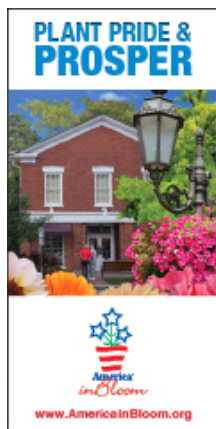
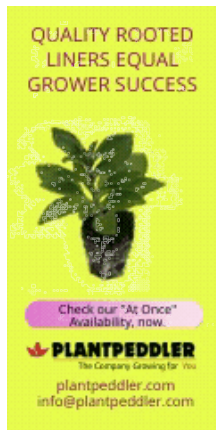
**Q: Describe the level of IDM resistance we can expect to see in the landscape.**

*A: The product will deliver high resistance to IDM. High resistance is defined by the International Seed Federation at the following link: [www.worldseed.org/wp-content/uploads/2017/05/Definition\\_on\\_reaction\\_plants\\_to\\_pests\\_2017\\_final.pdf](http://www.worldseed.org/wp-content/uploads/2017/05/Definition_on_reaction_plants_to_pests_2017_final.pdf)*

**Q: Will Ball/PAS share this technology with other impatiens breeders? Or will this remain exclusive to Ball?**

*A: We can't speak to these kinds of arrangements at this time. The discovery and performance trial results are so new that we are taking time to evaluate plans.*

**Q: How important is this breakthrough to bringing impatiens back to their spot as the No. 1**



## bedding plant?

A: *Bringing back impatiens has been an integral goal for our breeding team since the onslaught of IDM. These new genomic tools bring us closer than ever to realizing that goal, which we think growers, landscapers and consumers will all welcome.*

I think you'll all admit it's big news, and worthy of an exclamation point. As I learn more, especially regarding the timing of any introductions, you can be sure I'll pass it along pronto.



## Ray Greenstreet's plans for 2018

Ray Greenstreet is a great subject for my informal "what are you planning for 2018?" question, which I launched last time with Costa's Joche Smith. Based in Maryland, Ray is a grower, a retailer (three locations), a landscaper, and now a green wall installer. I caught up with him via phone at MANTS and hit him with my question.

"Green walls," he quickly replied. "We're looking at both residential and commercial. That's a direction we're pushing really hard in." Ray has been in the green wall business for a couple of years, and it's growing rapidly, he says. (see more below, including a video).

On the retail side, he said he's excited to see that millennials are getting into foliage plants, and added that he's seen evidence of that in his stores.

When it comes to customer service, he's realized that, especially in their Washington market, customers have limited time to garden, and to shop for the garden, so he's making sure that employees think about what else customers need to go with their primary purchase—fertilizer, soil amendments and the like—so they're successful and don't have to make another trip to the store.

Ray is reaching those customers more and more through social media, and will be doing more promotion and advertising on Facebook, Twitter and Instagram, but with even more emphasis on Google, where "We're posting pictures like crazy, right off our cell phones," he says.

Why Google for photos? Because that's the search engine most people use, he replied.

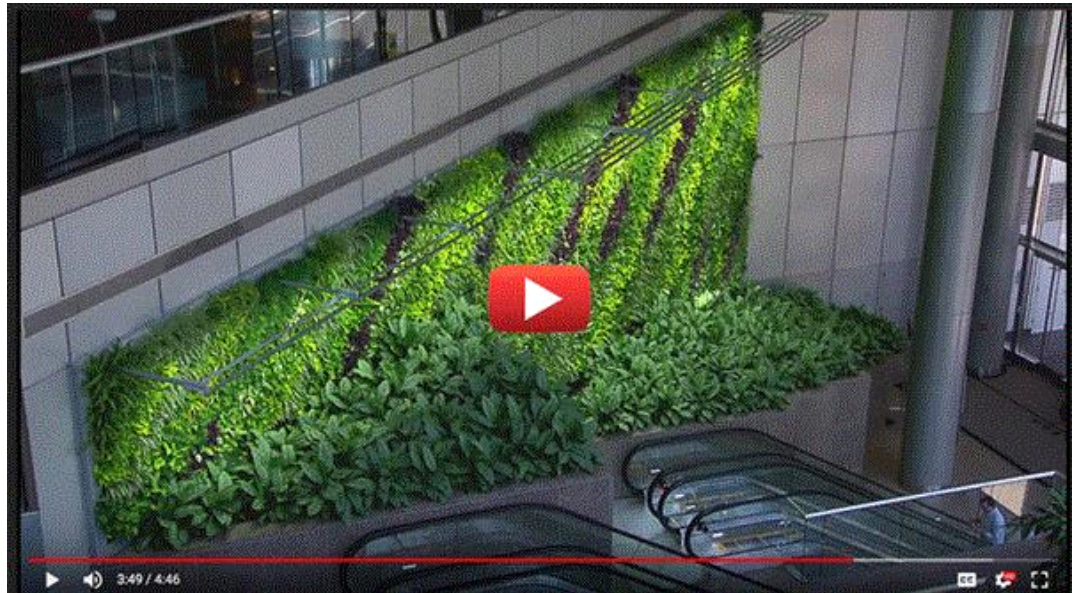
Overall, says Ray, "I think it's going to be a really good year. We saw footsteps increase in all our stores in November and December. ... we're hoping to see that trend continue into the spring."





## Greenstreet's Green Walls

That's almost poetic. And their walls are works of art. Check out this installation, the biggest in the D.C. area, that was featured December 19 on [Maryland Farm & Harvest](#), a Maryland public television program:



Nice piece, Ray! What I didn't realize about Greenstreet's green walls is that, in addition to the air-cleaning action of the plants' natural respiration, it's an "active" system that also filters the air by forcing it through the roots. The manufacturer, AgroSci of Colchester, Connecticut, calls it "aerogation."

This installation also features a bank of LEDs, which broadens the palette of plants that can be used, as well as illuminates it like the work of art it is.



## NGB's new varieties listing

If you're looking for one spot to find lots of new introductions for 2018, National Garden Bureau has you covered with their appropriately named "New Plants" program. You can find it at <https://ngb.org/new-plants/>.

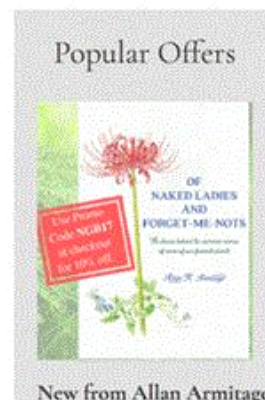
## Search New Varieties



Select One or More Requirements to Narrow Your Search:

Plant Category:

Year:  Common Name:



It features more than 100 new varieties, many of which were shown at the 2017 California Spring Trials, along with others that you've maybe not yet seen. It's a good resource for growers and retailers for ideas of what to grow and stock. And garden communicators can use it to help plan articles, blogs and shows.




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## BioWorks launches new biological fungicide

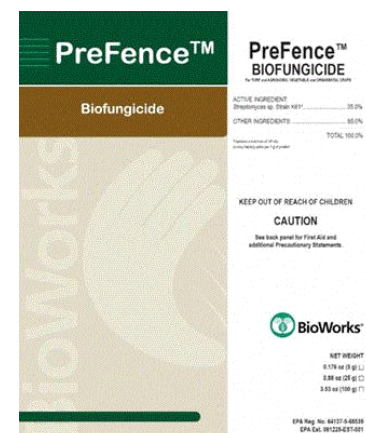
Here's some good news for anyone in need of an organic fungicide: BioWorks is introducing a new one. Called PreFence, it's an organic biological fungicide that they say controls a wide range of pathogens. And interestingly, one of its active ingredients is a bacterial strain found in peat.

Check out this list of diseases it controls: damping-off caused by various fungi, such as *Alternaria* and *Rhizoctonia solani*; wilt and root diseases caused by *Fusarium*, *Phytophthora* and *Pythium*. PreFence can also be used to suppress grey mold caused by *Botrytis*.

PreFence contains mycelium and spores of *Streptomyces* strain K61, a naturally occurring bacterial strain isolated from sphagnum peat.

Supplied as a wettable powder, PreFence is mainly used in the form of an aqueous suspension. You can apply it via drip irrigation; drenching or spraying onto the growing medium; incorporating into the growing medium; as a dry seed treatment; or as a bulb and cutting dip.

PreFence is a product that features well in programs with RootShield PLUS+ and CEASE/MilStop. It is safe for beneficials and is compatible with many chemical inputs.







## Finally ...

I've stayed close to home since my Australia trip in early December, but no good thing lasts forever, which means I'm back on the road. I head to Florida for **TPIE—the Tropical Plant International Expo**, which is next Wednesday through Friday in Ft. Lauderdale. Naturally, I'll bring you the highlights from the show and from the grower and retailer visits I'll do while in the Sunshine State.

Then I'm back home for two days before flying to Germany for **IPM Essen** to cover that big event for you. But first, I'll practice tying my bowtie for the **International Grower of the Year Awards**, which I will once again be emceeing. That's Tuesday, the 23rd; if I survive that without incident, I'll be at IPM Wednesday thru Friday looking for the coolest new products and trends from Europe. Watch for my report from the road! And if you've never been, but are curious what all the fuss is about, check out **THIS VIDEO** of the show that Jen Zurko and I made in 2015.

See you next time!



Chris Beytes

Editor

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