

GROWERTALKS

Features

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Cool Tools for the Greenhouse

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Grower Vertical—Practical Software Solutions

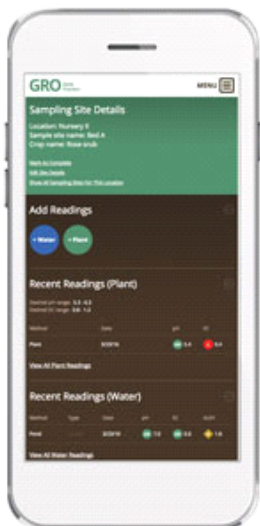
What's better than an app that can help you manage your greenhouse? A completely integrated, web-native software system that helps run a grower's entire business. Grower Vertical for Sage ERP, available exclusively from Practical Software Solutions, allows a grower to access any information about their business, anywhere, on any type or brand of device.

Greg Lafferty, Senior Account Manager at Practical Software Solutions, made sure to emphasize this is a tool, not a toy; this system is for mission-critical operations. It allows growers to view information on financials, inventory, shipping, logistics and production—all in one program. Greg also explained that Practical Software Solutions leveraged existing solutions for the manufacturing industry and applied it to horticulture to create their unique addition.

"Some of the problems faced in horticulture have been solved years ago in manufacturing," he said. "We should always leverage lessons learned by others."

Perfect for larger growers—especially those selling to big box retailers—this system helps to solve many common issues. For example, their Scan by Cart module rebuilds sales orders and generates all of the shipping orders, documents and labels as the product is loaded onto the truck, using hand-held devices and bar codes. This solves the problem of charge-back fees that result when a product is shipped in error to a retailer and reduces waste. Practical Software Solutions has partnered with DemandLink, helping growers put "big data" to use by accessing a retailer's information and more than 35,000 points of data to manage replenishment and improve forecasting. Many big box retailers like Home Depot, Lowe's and Walmart have already partnered with DemandLink.

For more information, visit www.GrowerVertical.com.



Grozonetracker.com

In-house testing and monitoring of pH and electrical conductivity (EC) can help to avoid many nutritional problems in crops. Grozonetracker.com makes recording and aggregating this data easy for both small and large businesses. It's a mobile website that's part of the e-Gro.org suite of apps that can record, monitor and share water quality and pour-through values. This data can provide insight into the substrate environment, mineral nutrient availability and subsequent crop health.

Each data point is geotagged and time stamped to easily track crop data throughout the production cycle. Additionally, grozonetracker.com provides instant feedback so you can see if recorded values are within the self-determined range, slightly outside the desired range or need immediate action to correct. Recorded data can be shared with selected individuals for easy internal communication.

The mobile website can be easily added as an icon on a mobile device via the default web browser and behave like a native app. However, there's no need to download from Google Play or the Apple Store. Grozonetracker.com was a collaborative effort by Virginia Tech University, Clemson University, North Carolina State University and the University of New Hampshire, and made possible by funding from the Horticulture Research Institute, American Floral Endowment and USDA National Institute of Food and Agriculture Specialty Crops Research Initiative.

Philips GreenPower LED Flowering Lamp 2.0—Philips Lighting

The Philips GreenPower LED flowering lamp 2.0 is an even more energy-efficient way to extend daylight or interrupt the night growing cycle in greenhouses for growers that cultivate strawberries, cut flowers, bedding plants and cuttings. The new Philips GreenPower LED flowering lamp 2.0 builds on the first generation of Philips GreenPower LED flowering lamps and comes in two different spectral versions with light recipes for growing cut flowers and soft fruit. The new highly energy-efficient lamp is designed to increase the yield, quality and consistency of crops and stimulate flowering. This flowering lamp looks like an incandescent lamp, but is made of robust plastic that mitigates the risk of damage to crops that can occur from broken glass lamps. In addition, they also have a standard fitting that allows them to be used in existing installations, saving on set-up costs for growers.

Spear-T and Spear-O—Vestaron

Vestaron's new Spear-T and Spear-O are targeted for control of major greenhouse pests, including thrips, whiteflies and spider mites in vegetable and ornamental crops. Spear offers effective control of pests in both field and greenhouse settings. All Spear bioinsecticide products offer the consistency and effectiveness of synthetic chemistries combined with the safety of biologicals. And field trials of Spear products demonstrate results equivalent or superior to conventional control chemicals.

Spear products are designed to be non-toxic for fish, birds, humans and other mammals, honeybees and other beneficial insects. The products' active ingredient utilizes two new modes of action to control insects, which will help delay the emergence of insect resistance, while enhancing performance. It also has a four-hour re-entry interval and zero-day post-harvest interval to maximize grower flexibility. Commercial availability expected in 2017.

eS Platform, Oasis Easy Plant, HydraPad—Smithers Oasis

Oasis Grower Solutions is announcing a new portfolio of technologies that support plants along their life cycle to ensure stronger, healthier outcomes.

As part of their focus on sustainability, the Oasis team introduced the eS platform—an ecologically sustainable line of products that deliver an ecological and/or sustainable benefit due to chemistry, manufacturing process or positive environmental effects along the supply chain. The eS platform includes:

- HortiCubes eS—Enhanced biodegradable engineered media for hydroponic propagation and production of a wide variety of crops
- Fertiss eS—Stabilized media plug wrapped in a 100% bio-based and natural material; easy, ready-to-stick propagation media for young plant production
- PlantPaper—100% natural, bio-based paper wrap for plant propagation media used in young plant production. Distributed by Oasis Grower Solutions.

The new Oasis Easy Plant is a hydroponic propagation system, available in plug, block and slab that supports growth from seed to plant, delivering strong plants and higher yields. The inert, pathogen-free media provides excellent moisture and optimal aeration for better root development and bountiful results. When compared to similar products, the open cell structure in Oasis Easy Plant allows easier management of the plant's rooting environment to steer them from vegetative to generative growth. Also, the foam can be crushed, making it easier to dispose of, significantly reducing its waste footprint.

Finally, the new HydraPad hydration substrate protects the potted plant through production to retail. The super-absorbent fibers help keep potted plants looking their best by serving as a hydration source during transportation and on the store shelf. Now, potted plants can last up to 30% longer, improving retailer profits and consumer satisfaction.

For more information, visit www.oasisgrowersolutions.com.

Prestop WG Biofungicide—AgBio

Prestop WG Biofungicide was recently registered in the U.S. for control and suppression of many diseases on a wide range of crops. The new wettable granule formulation is more concentrated than Prestop WP and no longer has foliar use restrictions. University tests have shown it to have high activity often equal to chemical fungicides for control of certain diseases, especially Fusarium, Pythium, Botrytis and other root and foliar diseases.

The active ingredient, Gliocladium, is hyperparasitic and coils around mycelium of fungal pathogens and uses enzymes to penetrate and kill the fungus. The Prestop Gliocladium can colonize roots and leaves, which adds to its biocontrol ability. Depending on the disease and intensity, the application interval can be lengthened from the typical one to two weeks to three to six weeks with Prestop. It's EPA registered and OMRI listed. For more info, visit www.agbio-inc.com.

Empress Intrinsic Brand Fungicide—BASF

BASF is introducing a new fungicide to help growers provide young plants with a strong foundation. New

Empress Intrinsic brand fungicide provides disease protection from four top-of-mind root and crown pathogens. Like all Intrinsic brand fungicides, it also delivers plant health benefits that include stronger, denser roots and resilience to the stresses that can occur in production.

Drench applications with Empress Intrinsic brand fungicide will protect young, susceptible plants from root-infecting pathogens in rooted plug, propagation and transplant stages of production. This fungicide protects young plants from major root diseases like *Rhizoctonia* (*R. solani*), *Phytophthora* (*P. cinnamomi*, *P. nicotianae*, *P. parasitica*), *Fusarium* (*F. oxysporum*, *F. solani*) and *Pythium* (*P. aphanidermatum*, *P. irregulare*, *P. myriotylum*).

It also promotes stronger roots—Intrinsic brand fungicides enhance growth efficiency to provide the healthy, dense root growth required for the production of high-quality plants. Empress Intrinsic fungicide also integrates with existing disease management, rotation and plant production programs.



Hip Hops and Grow for the Glory SpotLight Pots—MasterTag

MasterTag is offering two new design additions to the SpotLight pot series, Hip Hops and Grow for the Glory.

Hip Hops allows you to offer a novelty plant item in step with the microbrew trend, with packaging that clearly conveys its message. The Hip Hops pot is exclusively available through Ball and MasterTag.

Grow for the Glory is a patriotic-themed pot that can be used for Memorial Day and Independence Day, and allows you to extend sales into the summer. Grow for the Glory will be in stock and available for sale in early 2017, exclusively from MasterTag.

Both pots come with a coordinated tag on a riser. The SpotLight Pots collection offers many benefits to growers, such as consumer-ready themes with coordinating tags, custom designs to fit any program, a high-resolution printing process that relates to high-quality images and graphics, and low-order quantities, so retailers can keep displays fresh. In addition, they come in trade gallon and quart sizes, and as drop-in or grower pots.

Mainspring GNL insecticide and Syngenta Multipaks—Syngenta

Mainspring GNL insecticide guards greenhouse and nursery crops from key chewing and sucking pests, including thrips, whiteflies, aphids, caterpillars, leafminers and leaf-feeding beetles. It offers reliable, extended protection as part of a preventive pest management strategy.

A neonicotinoid alternative with a novel active ingredient, Mainspring GNL can be applied as a spray or drench in greenhouses, nurseries, and residential and commercial landscapes. It has a four-hour REI and requires no special personal protective equipment for early entry.

With new Multipaks from Syngenta, greenhouse and nursery growers will have what they need to preventively treat for many common insects and diseases they might face in the upcoming season. The most recent

product innovations are available all year long in the following offerings:

- Mural fungicide + Mainspring GNL insecticide Multipak provides broad-spectrum insect and disease control and application flexibility.
- Avid miticide/insecticide + Mainspring GNL Multipak offers comprehensive insect control with two modes of action.
- The downy mildew/Phytophthora Multipak contains three products, including Segovis fungicide, which make up an excellent rotation program for long-lasting control of both diseases.

Sunburst Ceramic Metal Halide (CMh) System—PARsource

New from PARsource, the Sunburst CMh System brings the benefits of ceramic metal halide lighting to small and large applications with the Sunburst's compact, all-in-one format. The Sunburst CMh has a built-in digital ballast designed specifically to run the 315W ceramic metal halide lamp (included), which in this system operates in the horizontal position. The reflector's interior is 95% hammertone aluminum and offers excellent uniformity and diffusion. A grower can choose between two different lamp spectrums, 3100K or 4200K, depending on their specific needs. For further information, visit <http://parsource.com/products/sunburst-cmh>.

Growing Mobile—Starcom

Using the latest innovations in mobile technology, Starcom is extending the power of their software tools for managing production, space, purchasing, inventory, replenishment, sales and shipping operations out into the greenhouse. Starcom's software, Growing Mobile, helps your operation communicate easier, and manage processes and costs more accurately and efficiently. It also allows you to track a wealth of critical data for crop profiling and historical analysis.

This year, they'll be adding full mobile labor and chemical application tracking to Growing Mobile. You'll be able to walk through the greenhouse, identify problem areas and immediately reference a library of treatments. You can then schedule the application activity, using the labor planning and tracking feature.

Your greenhouse crew can access concentration information and then record actual data in the field on their devices. This creates accurate histories of applications by crop, which allows for analysis of the efficacy of treatments and ensures regulatory compliance and reporting. It also integrates with the office system to automatically adjust chemical inventory in the warehouse and allocate costs directly to the crop.

Another new addition is real-time mobile space management. Growing Mobile software offers full space planning functionality to ensure forecasted production schedules will fit in the greenhouse. With the mobile space management application, you can easily plan in advance where next week's production should be placed as it comes off the line. Planting crews then have clear, specific layout instructions for maximum line efficiency, as well as accurate starting inventory counts by location. Also, you can react quickly to sales volume changes and schedule crop movement or spacing adjustments. As crews complete these scheduled moves, the inventory locations and the free and consumed space views are updated in the office.

For more information, visit www.starcomsoft.com.

SmartPAR and Pro Series E fixtures— LumiGrow

LumiGrow's SmartPAR is a wireless control platform that enables you to automate lighting zones and monitor LumiGrow lighting systems from a phone, tablet or computer. After accessing the SmartPAR URL on a device, you can then log in to a secure customer portal and control your lights in real time.

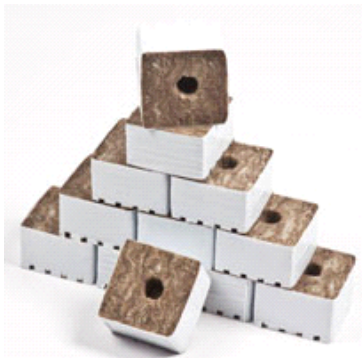
The lighting system allows you to easily create zones for instant production optimization across various crops and growth stages, without any additional infrastructure or wiring overhead.

Customized lighting strategies can be saved as spectrum control programs for quick implementation. These programs can be easily toggled between to run production trials and determine what works best. In addition, you can receive notifications that help monitor power usage and track optimal output.



SmartPAR has recently been updated to use a wireless control module that plugs into LumiGrow's Pro Series E fixtures. These fixtures, which have just been released, are designed to emit most of their light output within the red and blue PAR regions to offer the most light output that's optimal for photosynthesis, while keeping energy-usage very low. These fixtures have a small hardware footprint to minimize plant canopy shadowing. They also achieve up to 70% in energy savings versus HID lighting, while also running up to 70% cooler, maintaining light output longer than HID lights. Each Pro Series E fixture comes with a SmartPAR module included so they can be controlled remotely through their cloud-based interface.

For more information, visit <http://www.lumigrow.com>.



Speedgrow Green—McConkey

A McConkey exclusive in the U.S., Speedgrow Green is a series of natural propagating blocks made with an organic binder. Unique, formaldehyde-free technology creates Speedgrow Green by heating and spinning natural rock fibers. Speedgrow Green is available in a plug tray with 240 plugs; a 39-in. slab; 1.5-in. round plug; 25/32-in. croutons; and in 1.5-, 4-, 6- and 8-in. blocks. For more information, visit www.mcconkeyco.com.