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Segway Mower Takes Care Of Mowing

The Segway Navimow aims to remove lawn care from your weekend chores with self-powered, AI-enabled robotic lawnmowers.

The Navimow X3, the company's newest model, is designed to cover up to 2.5 acres, and the Navimow app lets you coordinate mowing with multiple devices at once. It features AI Assist Mapping for easy connection and control of the mower through the Navimow app. A few taps allow you to establish virtual boundaries with off-limit areas and safe channels between them.

The X3 enhances convenience with Alexa and Google Home voice control, making it possible to manage the mower with simple voice commands. You can start, stop and schedule the mower from anywhere, making it well-suited for second homes.

It boasts ultra-quiet operation at just 60 dB, half the noise level of fuel-powered lawnmowers. Many people find it quiet enough to run at night.

The Antenna Location Finder simplifies setup by analyzing RTK positioning and signal strength to provide feedback on the optimal location for the charging dock and antenna base. A weather-adaptive upgrade utilizes real-time forecasts to pause the mowing route and return to its charging base, protecting it from rain, snow, frost and more.

The advanced security features include outside-of-boundary alarms, lift alerts, GPS tracking through the Navimow app, and secret compartments for additional trackers.

Customers appreciate that the mower provides a neatly cut lawn without the need for raking, since the clippings are short enough to compost right on the spot.

"Today, my Navimows are completing their 6th fully autonomous, unsupervised,

and prescheduled mows," one user shared online. "This includes about 1/3 acre of somewhat bumpy grass, about 200 ft. of roadside curb, crossing two sidewalks and a driveway, and not a single hiccup for me to worry about. The only problem is that now my neighbors are gawking at it every time they walk or drive by and asking about the mower."

Others note that the mower works best when used frequently.

"They're designed to cut two to three times a week to keep grass the height you want," another user shares. "I have mine set to cut grass on Mondays, Wednesdays and Fridays. This way, the lawn is ready every weekend if we want to have people over or enjoy our yard on our own."

One user shared that their mower was problem-free until they attempted to mow at night.

"The mower got stuck when it rode up onto a perimeter in a spot with GPS," they said. "It was relying on vision."

Dirt, dampness, and sticks can also jam the mower or get it stuck. It won't cut all the way to the edge unless programmed to do so, meaning that a string trimmer might be necessary a few times a month.

Segway recommends replacing the mower's three blades every three to four weeks, while hosing the entire mower down at the same time to prevent grass buildup underneath. Several packs of replacement blades come with the mower.

Pricing starts at \$2,299 for the Segway Navimow X3 on the company website.

Contact: FARM SHOW Followup, Segway Navimow (<https://us.navimow.segway.com>).

Large Beverages On-The-Go

If you find your large water bottle or oversized coffee mug doesn't quite fit into your truck or cab's cup holder, you can use an expander adapter in your standard cup holder to keep drinks secure.

Seven Sparta is one of many companies offering expander adapters for sale that can hold up to a 40-oz. drink. It can expand to a diameter of up to 3 3/4 in. and fits standard cup holders ranging from 2 1/2 in. to 3 3/4 in. These adapters can be used in cars, trucks, motorcycles, boats, RVs, golf carts and equipment cabs.

The expandable base fits snugly into a standard cup holder, featuring an offsetting base that enables two expanders to be used side by side.

With over 16,000 ratings on Amazon and a 4.4 out of 5-star average, the Seven Sparta cup holder is available for \$16. A larger version is also available, which can expand to 4 inches and hold up to a 46 oz. container for \$20.

There are many others available on the market, including online at Amazon and at



Expander adapters fit into standard cup holders, allowing larger cups and bottles to sit securely.

retail stores like Walmart, Ace and Menards.

These cup holders are a great choice for securing large drinks when you're on the go. If your favorite coffee cup or water bottle doesn't fit in a standard cup holder, this could be the solution.

Ag Firms Unite for Advanced Crop Disease Solutions

Spornado, a Toronto-based company, has partnered with Agrtrinsic, an agriculture-focused technology business, to develop a broad platform that assists farmers with better crop disease detection and offers more accurate decision-making data.

A key component of this collaboration is the Spornado Spore Sampler, which captures airborne samples for DNA analysis.

"The idea is to complete the disease triangle, so bring spore data into risk management and integrated pest management decisions," says Spornado CTO Michael Saleh. "Before we came along, farmers would watch the weather and assume disease was present. Now, we're adding data so they can identify if it truly is present and make more informed decisions about spraying."

The Sampler is unbiased in its approach, capturing all particles, fungal or otherwise, from the air on a cassette or "membrane." It features a small, solar-powered fan that slowly pulls air through the cassette, aiding in collecting pathogens and air particles.

Agrtrinsic personnel collect the cassettes from the fields and ship them to the lab, where they're uploaded into the Spornado database. From there, they're transferred to the Agrtrinsic platform.

Depending on the crop type, the laboratories run tests for approximately 30 pathogens covering a dozen crops. Since the crop types are known, the labs run the related tests for the desired disease panels.

Spornado recommends at least one sampler per 100 acres. Currently, most of the units are positioned in corn and soy fields.

"Working with companies like Agrtrinsic



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expands the informational reach, making the data available to more farmers," Saleh says. "With this up-to-date information, they can make more accurate decisions about whether to spray and the best window of opportunity to complete it."

The Spornado Spore Samplers are manufactured in Toronto and are available throughout North America. They also have some exposure in two dozen countries around the world.

Unit cost depends on the number of lab tests required and the windows of susceptibility to different fungal pathogens. Interested customers are encouraged to contact Spornado for pricing packages and availability.

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There appeared to be some reduction in potato plant damage when moved outside before a frost event. All potato plants were damaged, yet the silica-coated plants had fewer completely top-killed plants.

Silica Spray Shows Promise Protecting Crops From Frost

Will Short, a graduate student at the University of Saskatchewan, is researching a spray designed to reduce frost damage in early spring crops. His study focuses on canola, with some testing also conducted on potato plants. He's hoping the results may be relevant to both vegetable producers and those involved in annual crop production.

After testing a previously researched kaolin clay spray from the U.S., Short began looking for a different solution.

"In my project, I've found that a spray based on hydrophobic silica is more effective as it has greater durability than the kaolin film when applied on canola," Short explains.

The spray is made of hydrophobically modified fumed silica, ethanol and water. Hydrophobic fumed silica is used in a variety of products, such as inks, cosmetics and food. Once the dispersion is coated on the leaf, the ethanol and water evaporate, leaving behind a superhydrophobic layer. This layer can allow plants to begin freezing at lower sub-zero temperatures by blocking ice propagation into the leaf.

Short has tested his innovation mainly on canola seedlings (cotyledon to 4-leaf stage)

and on recently emerged potato plants. From his small-scale testing, he's found that the spray needs to be applied about a day before a suspected frost event to allow enough time for the coating to fully dry.

In lab tests, he found about a 6 C difference in nucleation time when freezing canola seedlings. In a small-scale outdoor trial last fall, he measured a 1.5 C (2.7 F) delay in freezing. This spring, there appeared to be some reduction in potato plant damage when moved outside before a frost event. All potato plants were damaged, yet the silica-coated plants had a lower number of totally top-killed plants.

Short plans to conduct more outdoor tests this fall, including a small field trial on sweet potatoes. A marketable, commercialized product is a possibility, although more research is needed regarding field types and crop applications. He believes the spray should first be validated by another lab group, and/or in another region or country.

Contact: FARM SHOW Followup, Will Short, University of Saskatchewan (will.short@usask.ca).