

## SCiO Lets Farmers Test Corn In Field

The SCiO Corn Moisture Analyzer by Consumer Physics is the world's first handheld tool designed to assess the moisture content of ripening corn kernels.

"This tool is based on a technology called Near Infrared Spectroscopy (NIRS), where we use the interaction of light and matter to understand the chemical makeup of materials," says Damian Goldring, cofounder of SCiO.

While NIRS technology has been used within laboratories for years, this tool is the first product that moves the analysis into farm fields.

The SCiO Analyzer is built with a proprietary spectrometer that reads the light reflected from a sample of plant material. In this way, it analyzes the spectrum of the reflected light and then uses algorithms to assess the overall moisture level from 80 percent down to 8 percent.

By pressing the device against a ripening corn cob, you can test the corn kernel moisture in less than a minute. "This device is simple to use, accurate and affordable," says Goldring.

The device is smartphone-operated and connected to the cloud for in-app reports for tracking trends and real-time harvest planning. Its rechargeable battery should last for testing over 50 ears of corn before requiring a quick charge through a standard micro-USB cable.

At present, the SCiO is primarily meant for corn analysis by seed growers and agronomists. Consumer Physics is working to develop more calibrations to support other crops.

The company's other NIRS product, the SCiO Cup, has more versatility. It works to analyze forage as well as corn, grains (soybeans and wheat), and berries (strawberries, raspberries, blueberries, blackberries). Additional calibrations are being added frequently.

Both purchases include a one-year license for the SCiO device and app.



The SCiO Cup can analyze forage, corn, soybeans, wheat and berries.



The SCiO Analyzer can read moisture levels from 80 percent down to 8 percent and sends info to a cell phone.

"With this license, you get to use the corn-on-the-cob calibration. In addition, all scans are saved in the app and the cloud so one can always go back to see the scans that were taken. Our app also allows us to track the moisture in specific fields or locations and see the moisture trend as the season progresses. We also provide a map view where the moisture can be observed in different locations," says Goldring.

The SCiO Corn Moisture Analyzer with a one-year app subscription sells for \$2,200. Renewing the subscription costs \$1,600 annually.

Contact: FARM SHOW Followup, SCiO by Consumer Physics, St. Cloud, Minn. (sales@consumerphysics.com; www.consumerphysics.com).

## Solar Stills Deliver Safe Drinking Water

Solar distillation has been around for 150 years but Robert Foster of El Paso, Texas focused on drinking water when he founded Sol Aqua in 1999.

He has registered four U.S. patents for different distillation units since the company was started.

The Rainmaker 550 is one of his most popular solar stills and consists of a box or stand, glass, a special liner, tubing and collection container. Raw water is poured into the top and from there the heat of the sun begins the distillation process. Pure water is collected as harmful minerals, salts, bacteria and viruses are removed.

"It's ultra-pure water. Some labs even use it because it's about as clean as you can get," says Foster.

"Our liner is what sets our stills apart. You need something waterproof that holds up to the ultraviolet rays of the sun. The special liner handles the high heat as it can get up to 180 degrees inside the unit."

The 550 Rainmaker can be used in almost any weather including freezing conditions. Foster says the still will freeze but ice doesn't hurt it. It can expand up into the still but won't damage any parts.

He explains a wide mix of people buy the solar distillation stills particularly those with poor well water or needing to distill seawater for drinking.

"Many people in the southwest U.S. and northern Mexico have arsenic, fluoride or high salts in their water, and the distillation



The Sol Aqua Rainmaker distills water using its special liner designed to be waterproof and handle the heat of the sun.

process removes these. Some retirees in the pacific islands have plenty of seawater but little drinking water. Health-focused people who only want to drink distilled water also buy them."

The units are manufactured from scratch in El Paso and shipped all over the world.

"I've sold them to dozens of countries," Foster says. "Central and South America, the Middle East, Africa, Europe, and Australia. Usually, we send them as kits as it's cheaper that way. Buyers can get their own glass and wood locally if they prefer, and use our liner inside the box they build."

The Rainmaker 550 sells for \$450 plus S&H. A do-it-yourself kit sells for \$245.

Contact: FARM SHOW Followup, Robert Foster, SolAqua, P.O. Box 4976, El Paso, Texas 79914 (ph 915-383-1485; info@sol-aqua.com; www.sol-aqua.com).



Benny Friesen built a custom 28-ft. trailer to haul his half-size tractors to shows.

## Big Trailer Built To Haul Half-Size Tractors

With five half-size tractors to haul to shows, Ben Friesen needed a trailer. With some salvaged steel, a ramp from a trailer dealer, and an extra set of wheels he extended a 12-ft. long trailer to 28 ft.

"I wanted a trailer that could hold them all in a line, but I had to settle for overlapping them a bit because the trailer had to fit inside my 36-ft. deep shed," says Friesen.

The original trailer frame was made with 3 by 3-in. sq. tubing. To extend it, he butt welded more 3 by 3-in. tubing and reinforced the joint sides with flat steel. He reinforced the expansion by installing a railing of 2 by 2-in. tubing with flat steel angled braces on every other 1-in. sq. upright.

"At first I tried it without the angled braces, but there was some give," says Friesen. "The cross bracing really stiffened it up."

He added 5/8-in. plywood sheet for flooring with anchors mounted through it to the frame for ratchet strap tie-downs. They make it easy to secure his half-size Ford 8N, TD6 IH crawler, MM UDX, Farmall M and 1206 IH.

Friesen knew he would need help lifting a ramp/endgate, so he decided to buy instead of building. He picked up a closed spring endgate at TJ Trailers, although he did



Friesen reinforced the joint sides, trailer extension, flooring and ramp of his 28-ft. trailer.

reinforce it with some more 2 by 2's.

He also had to fabricate new fenders as he added an extra axle to the stretched-out trailer.

Friesen is pretty satisfied with his show tractor-trailer with one exception. The hitch is just 3 by 3-in. tubing and has started curving a bit.

"Being as long as it is, the trailer puts a lot of strain on the hitch," says Friesen. "I think I will need to reinforce it some."

Contact: FARM SHOW Followup, Benny Friesen, RR 1 Box 16, Morris, Manitoba Canada R0G 1K0 (ph 204-746-8436; banniefri@gmail.com).



Hay rings are made from recycled high-density poly so they won't corrode.

## Adjustable Diameter Poly Hay Rings

The AGI Poly Hay Ring adjusts from 5 to 7-ft. dia. to fit different size bales and can be fitted with a slow feed net. It's light enough that one person can flip it over onto a bale.

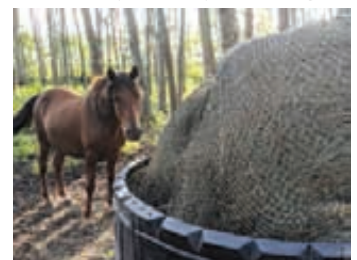
The rings are made in the U.S. from recycled high-density poly and can be used with any grazing livestock. They're UV-stabilized to prevent the plastic from breaking down under the sun. And unlike metal, the plastic feeder features a smooth, round edge that won't rust or corrode.

Poly Hay Rings are ideal for any horse owner looking to save money on hay while reducing wastage and the time spent cleaning up. The rings can be fitted with N.A.G. slow feed nets.

"It's especially beneficial if you have horses or ponies with digestive and metabolic issues, heaves or inhalant allergies, says Shay Von Hauff, a Poly Hay Rings spokesperson.

Each Hay Ring is adaptable enough to fit a range of bale sizes - you can adjust the total diameter to 5, 6 or 7 ft. by adding or removing plastic sections. You can also choose between two different heights.

Says Von Hauff, "The 24-in. tall hay ring is ideal for smaller animals such as goats, alpacas and llamas, while the 32-in. tall hay ring is more suitable for horses and mid-size ponies."



AGI Poly Hay Rings are adjustable and can be handled by one person.

You can use this feeder with or without slow feed nets. Thanks to their plastic construction, the hay rings are lightweight enough for one to person handle. All that's necessary is to remove the string or wrap from the round bale, place the ring beside the bale and then flip it over the top to surround it.

Prices per feeder range from \$400 to \$1,000 and vary based on location and market fluctuations. The best way to get an estimate is to contact the company directly.

Contact: FARM SHOW Followup, AGI Products, 169 E. Smith St., Bloomington, Ind. 47832 (ph 818-668-5061; www.agiproducts.com).