Pellet Grill Made To Last

The Yoder YS640S Competition Pellet Grill promises an excellent culinary experience, no matter where you grill. "The best attribute is its purposeful design," says a Yoder Smokers representative. "This begins with the pit's large, side-mounted firepot. It accommodates enough fuel to create that thin blue smoke synonymous with excellent meat flavor and texture."

The grill features Wi-Fi and Bluetooth connectivity, two integrated food probes, a ceramic ignition system and heavy gauge steel construction. "Our cloud-based technology is second-to-none in the pellet grill industry," the company claims. "Teaming up with Fireboard creates an operating system that takes cooking to a whole new level."

There are over 1,000 sq. in. of cooking space and nearly 12 in. of headroom, enough space for everything from pork butts to beer can chickens. "Want to slow smoke at 150 F or grill a steak at 700 F on the same grill? This is the cooker that will deliver."

Measuring 61.3 by 55 by 36.1 in., the smoker has a 20 lb. pellet capacity that allows it to run for up to 12 hrs., depending on the cooking and ambient temperature. "Pellet grills blend the benefits of traditional and charcoal grills while introducing unique features," the company explains. "They have all the convenience of a gas grill with a push-button start and temperature control but with the smoky, wood-fired flavor of a live-fire wood pit or charcoal grill. It's the best of both worlds."

While the smoker's temperature maxes out at 600 F, cooking over the firebox yields a much higher sear temperature. You can also set the controller to 225 F for brisket. "Likewise, compared to charcoal or wood cookers, pellet grills can run unattended for long periods. Their digital controllers feed the fire as needed, whereas wood smokers need hourly tending." Expect a heating time of 10 to 15 min. for direct grilling and 20 to 30 min. for indirect cooking.

Unlike many pellet grills today, this one is made in the USA. "Welding, prepping, painting and assembly all happen in our facilities with American craftsmanship," the company shares. "We always have and always will engineer, design and build our products domestically." The cooking body is made from 10-gauge steel for heat retention, while the hopper assembly and cart are made of 14-gauge steel.

"Our products are generational and are built to last a lifetime or longer," says a Yoder Smokers representative.

"Our products are generational and are built to last a lifetime or longer," the company says. Customer reviews agree, as many highlight how new the unit looks even after years of use, especially when users purchase the optional cover ($139).

Despite its 400 lb. weight, the grill's 8-in. flat-free tires make it easy to transport at home or on the competition circuit. "Yoder has become the go-to cooker for big cuts of meat in the competitive world. Its predictable results are a step above competitors," the representative explains. "Our custom-designed microprocessor manages the pit temperature, providing fuel at optimal rates. This smokey environment has produced world-champion results both in the backyard and at some of the largest competitions in the world."

Pricing starts at $2,849 plus shipping. The unit has a 10-year warranty on the cooking chamber and three years on the ACS controllers and ceramic igniter.

Contact: FARM SHOW Followup, Yoder Smokers, 1816 E. Wasp Rd., Hutchinson, Kan. 67501 (ph 877-409-6337; www.yodersmokers.com).

Laser creates a plasma of excited atoms and ions, which emit a light spectrum that the sensor can analyze. The multi-channel spectrometer measures thousands of data points.

Toolbar Laser Real-Time Soil Analysis

TerraBlaster is using technology developed for the Mars rovers to provide real-time soil analysis. Prototypes under development will be capable of capturing 15 different soil properties, including 13 different macro and micronutrients, plus moisture, pH and organic matter.

"We're in the very early stages of prototype development and testing, but we know we can provide very accurate measurements," says Jorge Heraud, TerraBlaster. "We're building five for the next generation. With those, we'll be able to gather data on tens of thousands of acres."

Mounted to toolbars, tillage equipment or other field equipment, the TerraBlaster module will deliver continuous, detailed soil data as it travels through the field. The data can be used to develop detailed field maps for all types of adjustable-rate, precision ag uses, from fertilizer application to planting and sidedressing. Mounted to the planter or applicator, it'll provide real-time data for immediate use. The implications for fertilizer application alone are huge.

"Farmers spend a quarter of a trillion dollars a year on fertilizer application worldwide," says Heraud. "Depending on the crop, it's usually the number one expenditure. We believe we can save farmers between 10 and 20% on applications while also increasing their yields."

TerraBlaster has only been in business for seven months, but the technology dates back decades. It combines lasers and spectroscopy in a technique known as laser-induced breakdown spectroscopy, initially developed by a NASA-funded company to analyze Martian soil remotely. The technology proved successful during its test on Mars and continues to perform reliably. The Curiosity rover, which landed in 2012, is still active today.

The laser creates a plasma of excited atoms and ions, which emit a light spectrum that the sensor can analyze. The multi-channel spectrometer measures thousands of data points. It'll measure total nutrient levels, as well as plant soluble levels and the difference between them, notes Heraud.

"We believe this data is the missing piece in precision agriculture," he says. "University researchers we have spoken with say real-time soil analysis is a game changer."

Heraud has a deep understanding of the potential and the challenges that precision agriculture has faced. He spent a decade with Trimble before co-founding Blue River Technologies, the source for John Deere's See & Spray technology, acquired in 2017. Since leaving Deere, he has advised several ag tech startups before focusing on and joining TerraBlaster.

"We're taking this technology and making it less costly," says Heraud. "Advances have been made in mobility, optics, spectronics and lasers since it was first developed by NASA. It's all been getting less and less expensive. We're ensuring it's accurate, rugged and dependable."

The initial prototypes will be self-contained systems. Eventually, Heraud expects TerraBlaster to be integrated with existing in-cab controllers and monitors.

"Our first step is to develop a production version," says Heraud. "Once we have it, we'll sign up dealers who can do retrofit installations on existing equipment."

He's confident that eventually farmers will be able to order the technology on new equipment. With it, he believes yield-limiting factors will be identified as never before.

"Potential yield increases have always been limited by some factor," says Heraud. "With TerraBlaster, we'll be able to know what in the soils is limiting yields. No longer will we have to rely on soil samples that are several years old or collected on grid sampling of every few acres. We'll have instant analysis of every inch TerraBlaster travels through the field."

Contact: FARM SHOW Followup, TerraBlaster (www.terrablaster.com).

Electric hoe has a runtime of up to 70 min., and can cultivate, hoe, hill, mow, haul and more.

Electric Hoe Uses Common Tool Batteries

The Tilmor E-OX electric hoe has five speeds and can operate from 20V or 18V batteries from Dewalt, Makita or Milwaukee.

Designed to reduce hand labor, it combines the function of a wheel hoe and the power of a walk-behind tractor. Folding handlebars also make it easy to transport.

E-OX is also effective in hoop houses or large greenhouses where exhaust fumes can be a problem. It features handlebar controls and a battery indicator, and can run at speeds of up to 3.6 mph.

Measuring 45 in. long and 34 in. high, the E-OX is 16 in. wide. Modeled after the Planet Jr. Tuffy cultivator, its tools also fit the E-OX.

Prices start at $1,950 online, plus shipping. Batteries are not included, and you'll need to order a model that matches your current battery brand. Two batteries are required for operation, and they recommend 6.0 Ah batteries. The electric hoe has a runtime of up to 70 min., and can cultivate, hoe, hill, mow, haul and more. Run times are based on real-world testing but may vary depending on actual conditions.

"We're grateful to have a relationship with Tilmor and the job that their tool has brought to our farm," says Carl Pepper of Pepper's Farm in Lubbock, Texas.

Tools can be switched with a pull of a pin at the back of the unit. Available attachments include a finger-weeding kit, oscillating hoe, plow set, cultivator teeth kit and side knife kit. They're available individually or as a package online. All five tools will add $1,130 to the price, plus shipping.

Tilmor offers a limited 1-year product warranty. The E-OX and tools can be ordered online or by calling Tilmor.

Contact: FARM SHOW Followup, Tilmor, 295 Kurzen Rd. N., Dalton, Ohio 44618 (ph 844-255-5864, info@tilmor.com; www.tilmor.com).

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