Aeration systems help operators manage airflow in large bins, while grain monitoring products track conditions that directly affect grain quality.

Smart Grain Monitoring For Large Bins

In modern grain handling, as bins grow larger and operations more complex, efficiency is no longer just about moving product from point A to point B but about protecting quality, reducing risk, and using data to make faster, better decisions.

SafeGrain is addressing these issues for larger and commercially based agricultural operations.

"We don't build bins or elevator legs, but we do our best to make them all work better," says SafeGrain's Director of Sales and Marketing, Bob Hothem.

The company's strength lies in offering four connected product lines under one roof: aeration and fan automation, quality monitoring, inventory management and hazard monitoring.

"Our competitors have one or two of the products and services," Hothem explains. "We're a one-stop shop with all four."

SafeGrain's aeration systems help operators manage airflow in large bins, while its grain monitoring products track conditions that directly affect quality. Traditional temperature cables remain widely used, but SafeGrain's newer digital systems go further by measuring temperature, moisture and carbon dioxide within the grain mass. This matters because in today's massive bins, spoilage can develop long before a temperature-only system detects it.

"Earlier detection means earlier action, whether that's automatically turning on fans, sending alerts, or helping customers decide when it should be moved or sold," Hothem says.

SafeGrain's inventory management system adds another layer of control. Its radar-based level monitoring gives operators near-continuous visibility into bin levels, an advantage for facilities moving large volumes of grain in and out. Equally important is the company's hazard-monitoring line for elevator legs, where combustible dust, overheating bearings, belt misalignment and slow-running shafts create the catastrophic risk of dust explosions.

SafeGrain's newer digital systems go further by measuring temperature, moisture and carbon dioxide within the grain mass.

"By alarming early and shutting equipment down when thresholds are exceeded, these systems are designed to prevent serious incidents before they start."

All SafeGrain products and services are backed by cloud-based monitoring, mobile and computer access, technical support and flexible installation options. The systems can be used across crops, including canola, wheat and rice, with configurations tailored to the stored material.

Installations are online across Canada, the U.S., Asia, Egypt, Turkey and South America.

"SafeGrain isn't just selling sensors and software," Hothem says. "We're making the case that better visibility, better automation and better protection are now central to profitable grain handling."

Hothem recommends that interested parties contact SafeGrain through the website for details on pricing, availability and installation options.

Contact: FARM SHOW Followup, SafeGrain, 10522 Success Ln., Dayton, Ohio 45458 (ph 800-659-8250; info@safegrain.com; www.safegrain.com).

"The liquid is full of nutrients, but we add potash to make a 2-2-2 organic fertilizer," Prantera explains.

New Fertilizer Is Squid-Based

GreenFlow Corp stands out as an innovator, producing Squid Juice, a unique fertilizer made from repurposed leftover calamari-processing byproducts. It's the only company producing this type of product in Canada and the sole commercially available option in the U.S.

"We repurpose leftover squid into certified organic, sustainable fertilizer that doesn't just provide nutrition but is a natural defense, pesticide, fungicide and insecticide," says Sammy Prantera, GreenFlow's Director of Sales.

The largest squid fishery on Massachusetts' East Coast processes Atlantic Ocean squid into calamari and, on-site, converts byproducts into high-value organic fertilizer. It partners with GreenFlow Corp under an exclusive manufacturing agreement.

Forty-eight percent of a squid is used for calamari, while the remaining 52%, once considered waste and thrown back into the ocean, is now fully repurposed through a low-heat enzymatic process to produce a liquid concentrate.

"The liquid is full of nutrients, but we add potash to make a 2-2-2 organic fertilizer," Prantera explains. "Most of the benefits are the squid nutrients, but we want the NPK balance, so we make the potash addition."

A key differentiator of Squid Juice is the rare form of chitin in the fertilizer. Derived from the squid pen, this beta-chitin is more bioavailable and fast-acting than the crystalline chitin found in crabs or shrimp. This capability makes it an effective foliar with easier access to the soil than chitin derived from harder crystalline structures.

"Bio stimulants are a new trend in the last 5 years of farming, and Squid Juice is the only water-soluble, bioavailable form of chitin on the market," Prantera explains. "Chitin increases yield, flavor, brix and terpenes for overall quality and strengthens a plant's defense mechanisms, including stress, drought and pest and fungal suppression."

Squid Juice liquid fertilizer isn't only safe, requiring no special safety equipment, but it also enhances biodiversity.

GreenFlow supplies over 100,000 gal annually, primarily in 1,000-liter totes sold by the truckload to dealers who serve individual growers. Their distribution network reaches nearly every state, serving horticulturists, vineyards, orchards, fruit and vegetable growers, and large-acreage cash crop farmers.

"Farmers can apply the all-purpose concentrated liquid fertilizer from germination to harvest as a drench, in-furrow as a liquid starter, and as a foliar spray application. It's a dynamic product for different areas, seasons and crops."

Efficacy trials with colleges and farm partners are ongoing to assess benefits beyond nutrition, including chitin's impact on pests and diseases. The product is OMRI Listed and CDFA Certified in the U.S. and Ecocert Certified in Canada for organic use.

One gallon treats about one acre, and at $16 to $17 per gallon, GreenFlow's Squid Juice fertilizer offers an environmentally friendly and effective solution for modern agriculture.

Contact: FARM SHOW Followup, GreenFlow Corp, 195 King St., Unit 106, St. Catharines, Ontario, Canada L2R 3J6 (ph 289-454-5462 or 888-552-3651; info@greenflowcorp.com; www.greenflowcorp.com).

System draws air through the grain rather than blowing it. It's straightforward, consisting of a 5-in. dia., 72-in. long tube with the lower 36 in. perforated.

Aerator Built For Smaller Grain Storage

Even a modest innovation can make a meaningful difference in grain storage, especially for smaller farmers.

AFS Products' portable grain aerator unit delivers steady airflow to gravity wagons, grain carts or small grain piles without an investment in a larger drying system.

"Our customers asked for something like this, so we thought we'd invest the time and energy to make our own," says AFS Managing Partner Vernon Martin.

The system draws air through the grain rather than blowing it. It's straightforward, consisting of a 5-in. dia., 72-in. long tube with the lower 36 in. perforated. A 1-in. hole near the top of the piping holds a short bar to help screw the unit into a grain pile using the pipe's screw-style tip.

The aerator's fan system offers flexibility. An adapter screws onto the fan and fits into the tube, allowing the fan to be moved from one tube to another as needed. Powered by a standard 110-volt outlet, it uses variable-speed control to adjust airflow. For a grain cart or wagon holding a few hundred bushels, farmers might use two units, depending on moisture levels and grain cleanliness. A protective screen covers the fan's blades for safety.

This simple airflow tool can help farmers harvest earlier while reducing condensation, sweating, and top crusting in stored grain.

"It's not strong enough to dry grain, but it'll keep a low airflow moving through piles," Martin says.

While the tubes and fans are sourced elsewhere, AFS Products handles the adapters and final assembly in-house. The aerators are primarily sold directly to customers, with limited dealer distribution, and can be shipped internationally when logistics allow.

At $488 plus S&H for a complete setup, the unit is ideal for small-scale producers and hobby farmers seeking a simple, versatile way to preserve grain quality.

Contact: FARM SHOW Followup, Automatic Farm Systems, 608 E. Evergreen Rd., Lebanon, Penn. 17042 (ph 717-274-5333; www.afsproducts.com).