

# Pecan Processor Enhances Safety With Metal Detector



Although wild pecans were well-known among the colonial Americans as a delicacy, the commercial growing of pecans in the United States did not begin until the 1880s. Today, the United States produces between 80 and 95 percent of the world's pecans, with an annual crop of 150,000 to 200,000 tons. Historically, the leading pecan-producing state in the country has been Georgia, followed by Texas, New Mexico and Oklahoma.

Not surprisingly, one of these pecan processing operations, Stone Mountain Pecan, is headquartered in Monroe, Georgia, about 40 miles from Atlanta. Stone Mountain Pecan has based its reputation on bringing quality pecan products to market and takes measured steps to ensure product purity before shipment.

Stone Mountain Pecan has expanded its distribution operation beyond pecans; the company also sells a variety of mixed nuts, dried fruit mix, candies and gift tins via a wholesale network. However, pecans are still the company's main business crop. To transport the fresh nuts from growers to ultimate customers, Stone Mountain utilizes the latest equipment along its processing line.

"We process the inshell pecans and sell the nut meats," explains Robby Coker, Owner. "Before the pecans are placed into boxes, we inspect them visually for any sign of metal contaminants. We also use a series of magnets to remove any ferrous metals." He adds, "A nut or bolt from processing equipment can break off and fall within the pecans. If that happens, we need to find it."

Once the inspection is complete, the pecans are placed into 30 pound boxes, ready for shipment. "We've never had a problem detecting metal visually, but in today's climate you have to go further and look to add another margin of safety. That's why we invested in an Eriez Metal Detector," Coker says.

### Another Safety Option

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Now, before the 30-pound boxes full of pecan nut meat are shipped to customers, they are passed through an Eriez E-Z Tec DSP Metal Detector. The cartons, which measure 9" H x 13 1/4" W x 16 3/4" L, move easily through the 11" H x 16" W metal detector aperture, which is mounted on a 14" W x 60" OAL plastic chain-style belt conveyor.

"We purchased the Eriez Metal Detector to add a redundancy to our processing operation; it adds another safety factor. It detects any stray metal not picked up visually," Coker says.

The Eriez E-Z Tec Metal Detector installed at Stone Mountain comes with an integrated belt conveyor and specified reject mechanism. This custom built E-Z Tec Metal Detector Conveyor System features a continuously welded stainless steel frame, fixed speed drive, 1/4 Video Graphics Array (VGA) Touch Screen interface, automatic balance and reject confirmation and consolidated power supply and control with four electronic boards housed in a NEMA 4X enclosure.

### **Investing In A Backup**

The E-Z Tec Metal Detector uses three coils wound around the aperture to sense metal moving through it. The center coil (transmitter) emits an electromagnetic field throughout the metal detector aperture space. Two receiver coils (placed equidistant on either side of the transmitter coil) are connected in series so that the energy coupled from the center coil to either of the receiver coils exactly cancels the energy coupled to the other receiver coil; the net output of this pair is essentially zero.

Metal passing through this set of coils creates an imbalance, which, if the signal's amplitude is large enough, will result in detection. The metal detector can be set for a certain degree of sensitivity. Many factors influence the sensitivity, including characteristics of the product being screened, type and shape of metal to be detected, aperture dimensions and the position of the metal particle within the aperture. Coker says he found the Eriez E-Z Tec Metal Detector through an online search and purchased the Eriez unit based on the affordable price and the capabilities the equipment offers.

"The Eriez Metal Detector gives us another level of safety, providing a backup to our visual inspection system," Coker says. "When the pecans leave our processing plant, we know they are free from metal contamination." He adds, "The Eriez E-Z Tec Metal Detector was a great investment."

*For more information, call (888) 300-ERIEZ (3743) within the U.S. and Canada. Visit [www.eriez.com](http://www.eriez.com) [1] or send e-mail to [eriez@eriez.com](mailto:eriez@eriez.com) [2].*

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