

## California Gold Almonds See Product Purity Increase at Two Facilities

### Using Eriez® Metal Separators and Electromagnetic Feeders

Almost 80 percent of the world's almonds are produced in California, so it's not too surprising that California Gold Almonds (CGA) is using state-of-the-art operational procedures and technologically innovative equipment to harvest and handle this increasingly popular cash crop.

Like all food manufacturers, CGA needs to meet rigid food safety guidelines, especially with the USDA, FDA and the British Retail Consortium (BRC), since the company exports almost half of its total volume to a European customer base, where almonds have always been a food mainstay.

Helping CGA maintain this important product purity are a series of Eriez® 66C and 46C Electromagnetic Feeders, Model FF Metal Separators and a variety of Rare Earth (RE) plate and tube magnets. The Eriez equipment is installed at both the company's Tenaya and El Roya processing plants in Modesto, CA, part of the lush San Joaquin Valley.

"Eriez helps us stay in compliance with the USDA and FDA and it is a key for our BRC certification," says Mick Tobin, General Manager at CGA. "The equipment gives us a cut above in the almond industry and it gives us a competitive advantage from a technological standpoint. It allows us to build more efficient processing lines, while reducing human touching and handling of the almonds."

Almonds are California's top agricultural export and the largest tree nut crop in total dollar value and acreage. They also rank as the largest U.S. specialty crop export, according to the Almond Board of California. Those figures correspond with CGA shipments as the company sends 70 percent of its crop internationally, according to Tobin.

CGA produces premium almond ingredients by managing control from tree to package. The almonds are primarily grown on farms that the company owns and operates in the heart of almond country. The 35-employee company also collaborates with neighboring farmers, whose almonds meet CGA's standards for quality and freshness.

Almonds grow from tree varieties developed using natural breeding, meaning the almonds are not genetically modified (non-GMO). CGA pumps water from its wells supplied by the Sierra Mountains and it rents honeybees to pollinate the almond orchards and some well pumps are powered via solar panels.

Along with the Eriez products, the company's top-of-the-line food-grade facilities contain cutting edge equipment to shell, sort, pasteurize, roast, dice, slice, mill and pack almonds. This enables CGA to have high standard confectionery grade almonds. Technology on the shop floor includes optical and infrared sorting, low-moisture pasteurization and constant-vibration roasting.

#### Eriez equipment brings quality assurance to both plants

The Tenaya and El Roya processing facilities are a quarter mile from each other, but they serve different customer bases, according to Tobin. The 35,000 square foot Tenaya facility, built about three years ago, processes almonds for domestic customers while the larger, 84,000-square-foot El Roya facility built two years ago satisfies the company's export business. By processing millions

of pounds of almonds annually between the two facilities, CGA satisfies the demands for a vast array of customers including yogurt and ice cream shops, chocolatiers, bakeries, gluten free baking mix makers and industrial giants.

The Tenaya facility is designed for confectionary grade almond processing at the retail level, according to Tobin. Here, the incoming raw almonds fall freely through a series of Eriez Model FF Metal Separators, which are designed to detect all magnetic and non-magnetic metal contamination, even when embedded in the product. Metal contaminants are then rejected through the “Quick Flap” reject unit.

Next, the Eriez 66C and 46C Hi-Vi Electromagnetic Feeders properly convey the precise amount of raw almonds—approximately 12,000 pounds per hour—that eventually pass through an optical sorting line and into the packaging process.

The Eriez feeders feature a totally-enclosed patented magnetic drive and can feed practically any bulk material from micron size to bulky chunks. Standard units operate at temperatures up to 130° F. while high-temperature units are available for temperatures up to 300° F.

“We have the Eriez feeders and metal separators in strategic locations to help us monitor contamination and maintain accurate feed rates,” says Tobin. “The Eriez equipment gives me a lot of confidence for precise operation, especially when we also have our optical sorting, hand sorting, and dicing, slicing and packing going on.”

Meanwhile, at the El Roya plant, two Model FF Metal Separators and several RE Plate and Tube Magnets help detect and remove contamination from almonds destined for exporting to a European customer base. The Eriez equipment is installed on a main processing line conveying 20,000

pounds of almonds per hour and a secondary line conveying 15,000 pounds per hour, according to Tobin.

Plate Magnets installed in chutes, spouts, ducts, and pipes or suspended over conveyors remove tramp iron to help prevent costly shutdowns associated with machinery damage. Individual Tube Magnets are used as a quality control check of dry bulk materials and in many other ways where a powerful, portable magnetic power source is needed.

"I like the consistency of the feed rates on our main conveyor lines at both facilities," says Tobin. "The metal detectors are a key component of our Critical Control Point (CCP), especially when we are audited by the FDA for food quality standards."

"I've been in the food processing business for more than 20 years and I've had a chance to see many different operations. I've been able to take my experience and Eriez technology to help maintain a highly efficient processing operation here at CGA," Tobin concludes.

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Eriez is recognized as world authority in separation technologies. The company's magnetic lift and separation, metal detection, fluid filtration, flotation, materials feeding, screening, conveying and controlling equipment have application in the process, metalworking, packaging, plastics, rubber, recycling, food, mining, aggregate and textile industries. Eriez manufactures and markets these products through 12 international facilities located on six continents. For more information, call toll-free (888) 300-ERIEZ (3743) within the U.S. and Canada. For online users, visit [www.eriez.com](http://www.eriez.com) or send email to [eriez@eriez.com](mailto:eriez@eriez.com). Eriez World Headquarters is located at 2200 Asbury Road, Erie, PA 16506