Kathy Levy | InfoProse

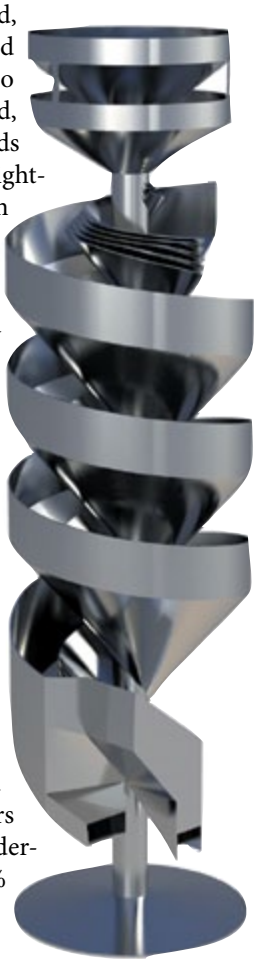
U.S. Drought Brings Flood of Business

IN A DROUGHT, perfectly round soybeans are as valuable as raindrops. That's one reason why sales of Profile Industries' spiral separators to the agriculture market have sprouted this summer. "A 300 percent increase in sales this year would be a conservative estimate," says Steve DeJong, Vice President of Sales and Engineering with Profile Industries. His separators are being snapped up by international seed companies such as Monsanto, Pioneer, Cargill and Syngenta.

The U.S. drought and the resulting losses in corn and soybeans, the nation's two biggest crops, will have a significant impact on seed prices. Soybeans for food consumption are normally around $10 per bushel. Projected prices for this year are $15 to $17 per bushel. Soybeans grown for replanting will have similar price increases.

THE NEED TO CAPTURE EVERY SEED

Spiral separators separate damaged, flat or wrinked seed from the desired round-shaped healthy seed. They also divide round seed, such as mustard, rape, soybeans and peas, from flat seeds and debris. Spiral separation is a straightforward process that is dependent on the laws of physics and a precisely designed piece of equipment. The seed material is discharged onto a banked metal flight, which is spirally wound around a central shaft. As the material flows down the banked surface, its speed increases, and centrifugal force carries it toward the outer edge of the flight. Round materials achieve a velocity sufficient to carry them over the outer edge of the flighting. Non-rounds and less dense material are unable to reach the edge. They continue to travel downward, and ultimately exit separately at the bottom.



While a few desireable seeds will end up in the reject bin with any seed separator, Profile's spiral separators capture more good seed than the older-technology gravity separators. Up to 5% percent of the material in the reject bin of a gravity separator will be good seed. Run the same amount of seed through a Profile rotary spiral separator and only .0025% of the material in the reject bin will be good seed. Throwing away good seed is throwing away money and no one can afford to do that, especially this year. The higher yields quickly pay for the investment in new equipment. Mr. DeJong estimates that his machines pay for themselves within six months.

Damaged seeds, like these soybeans, can't achieve enough speed to escape from the inner flight of a separator and they exit the bottom of the machine.

MORE CONTROL EQUALS BETTER YIELDS

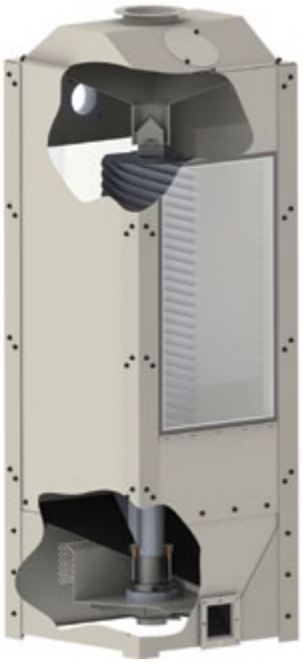
Profile recently introduced a motorized rotary spiral separator with a PLC/HMI controller. Machine operators can now quickly and easily adjust motor speed—and thereby the rotation speed of the spiral core—based on differences in the size, weight and shape of the seed material. Since the speed of the material as it moves through the separator is one of most important variables when separating good from undesirable material, the new motorized machines produce higher yields of good product. Most of Profile's sales to seed companies are of the new rotary spiral separator.

Profile is growing their sales to the glass bead market, too, thanks to their new generation of separators. A leading producer of glass beads uses Profile's separators to capture up to 80% more good glass bead than they captured with their

Profile's products for the industrial and agriculture market are the same. The differences between surface finishing media and seeds are easily accomodated by a variety of metal flight sizes and the number of spirals in a separator.

older separators. "The metal finishing industry is slower to appreciate rotary spiral separators than the farming industry but some sectors, like glass bead manufacturers, are definitely catching on," said Mr. DeJong.

Profile's products for industrial and agriculture markets are similar. The differences between surface finishing media and seeds are easily accomodated by a variety of metal flight sizes and the number of spirals in a separator. There are more similarities than differences between seed and media: Seed in a spiral separator is as noisy as metal shot. An estimated 50 percent of Profile's agriculture market sales have been of their enclosed spiral separator that reduces noise and dust.



The machine operator can adjust the variable separation speed of Profile's enclosed Rotary Spiral separator. It's used in industrial and agriculture applications where more control and noise reduction are required.

PLANNING FOR FUTURE GROWTH

The drought isn't the only contributing factor to Profile's success in the agriculture market. Mr. DeJong has aggressively marketed their products to global seed companies at agriculture trade shows in the past year, spreading awareness of the benefits of reduced waste, increased productivity and higher profits of their rotary spiral separators. "There is a natural migration from the old technology in static and spiral separators to rotary spiral separators," said Mr. DeJong. "I wanted to make sure we had top-of-the-mind awareness when buyers were ready to make the change. I think the drought speeded up the buying process."

"It wasn't in our business plan to prosper due to the hardship of others so I like knowing that seed companies are using our products to capture more seeds for food now and for planting in the spring of 2013," added Mr. DeJong.

Soybeans Make the World Go 'Round

Round soybeans are better in agriculture, just like round media is better in shot peening applications. An oval soybean has the same properties has a round bean, but the market—especially the food market—prefers a round bean. China drives this preference and even though most of their soybeans go into tofu where the shape of the soybean is irrelevant, the Chinese buyers prefer round beans, according to Steve DeJong with Profile Industries.