

People & Places

Pelletized compost may have many uses

By DAN WHEAT
Capital Press

ROYAL CITY, Wash. — Sometimes people don't plan on being innovators. They sort of fall into it.

That's what happened to Thad Schutt and his partners Chuck Graaff and Tyler Schilperoort, co-owners of Royal Organic Products of Royal City. After five years of research and development, they've launched what they believe is the first compost in pellet form for precision agriculture.

Five years ago, the partners didn't own Royal Organic but were running its bulk composting facility, between Royal City and Vantage, for A.M. Todd Group, a manufacturer of flavor compounds and botanical extracts, primarily mint oil, based in Kalamazoo, Mich.

A.M. Todd started the composting operation in 2004 as a way of getting rid of spent mint plants after oil extraction to keep oil production going. Schutt, Graaff and Schilperoort were approached by a sustainable, no-till grain co-op that wanted to add compost to its soil but didn't want to till to do so.

The three became drivers of a project to pelletize compost that could be dropped into the ground with seed or fertilizer.

"We didn't have a lot of corporate support, but all three of us wanted to get the game going," Schutt said.

"In the composting industry a lot of the mentality is recycling or reduction of waste. It's management of waste. The three of us all come from farming backgrounds and think of compost as a product. Good quality product is our driving force as opposed to waste management," Schutt said.

"We knew the biggest issue was getting compost out of its bulk application. There's a lot of handling, specialized equipment and diesel involved in applying it in bulk. It gets costly," he said.

Bulk compost is used primarily in organic food production, not so much in conventional because it is too costly or perceived as too costly, he said.

In 2011, A.M. Todd Group was purchased by Wild Flavors Inc. of Erlanger, Ky. Composting didn't fit in the corporate vision, so Schutt, Graaff and Schilperoort bought Royal Organic Products in 2012 and continued research and development of



Dan Wheat/Capital Press

Thad Schutt and Chuck Graaff hold pelletized compost in their hands, June 8, that is being used with wheat, canola and barley and could be used for many crops. Much of their spring production is in the bags in the background.

Western Innovator Thad Schutt

Age: 47

Born and raised: Born in Sunnyside, Wash., raised on a farm near there.

Family: Wife, Lisa, educational consultant. Daughter, Sofia, 5.

Occupation: president and co-owner, Royal Organic Products, Royal City, Wash., since 2012.

Work History: Crop duster, flight instructor, Prosser, Wash., 1992 to 1995; mint buyer and fieldman for A.M. Todd Group, Caldwell, Idaho, 1995 to 2000; North American purchasing manager, A.M. Todd, 2000 to 2006; manager, Royal Organic Products, 2006 to 2012.



pelletized compost.

Among their challenges was producing a pellet small enough to be used with fertilizing or seeding drills while maintaining nutrients and organic matter.

They consulted with a pelletizing specialist. They worked on pellet shape, design and hardness. Their barrel-shaped pellets are slightly more than 1/8th inch in diameter and up to 1/2 inch in length.

"Our big innovation was low volume application with the seed into the seed zone for immediate treatment. That's where it becomes economic as opposed to massive bulk application for the entire soil," Schutt said.

The breakthrough in that came with the help of Jill Clapperton, a Spokane soil health scientist, he said.

"It's putting the pellet very close to the seed to make contact quickly. It comes down to proximity and density of material to seed," Schutt said. "Microbiology is the big thing. It migrates along the root path as the roots grow so you get more efficient use of nutrients to the plant."

They discovered that the

temperature at which pellets are manufactured is very critical to the preservation of microbiology for delivery to the soil.

"Protecting our biology is our big deal. Not too hot or dry. The right mix of temperature and moisture," said Graaff.

"No one else is pelletizing compost that we know of, at least not like this," Schutt said. "The secret is getting small enough pellets to go through an air drill when planting seed. We have two patents pending on use of the pellets in low volume use in agriculture and using them for seed bulking."

Their product, called Compell, has been field tested for four years and entered commercial production at a plant they began operation south of George in April. They plan to produce about 20,000 tons annually and anticipate growth.

Clapperton said Compell is a natural, carbon-based product, a recycling of biomass with very high water holding capacity.

"It's like a little sponge around the seed," she said,

there for the seed as soon as it germinates and begins to grow.

It could help crops in drought and struggling on eroded knolls, she said. It's innovative and could benefit a large array of crops, she said.

Schutt is a good listener, she said.

"He listened to what people wanted. A compost product. A dry product, but not powdery to clog drills," she said.

Compell is a blend of the company's two bulk products, Soil SupliMint and Royal Classic Compost. The former is made only from mint plants after oil extraction. It's nutrient-rich, an organic compost suited for organic uses.

Royal Classic is made from yard waste, food scraps, cull nursery trees and other green and wood wastes. No manure nor biosolids are used.

SupliMint and Royal Classic are used in organic apples, cherries, pears and wine grapes. It's also used in potatoes, wheat, carrots, onions and other crops.

The bulk composts sell for \$23 to \$32 per ton and applied at two to five tons per acre cost \$46 to \$160 per acre before the cost of hauling and spreading. It's usually mixed into the top three to five inches of soil with a harrow or disc.

Compell sells for 25 cents per pound. The ideal application rate is 40 to 50 pounds per acre on dryland wheat so it costs \$10 to \$13 per acre and hauling costs are less than bulk, Schutt said. Application is nothing extra because a drill is already seed-



Dan Wheat/Capital Press

Compost pellets, called Compell, manufactured by Royal Organic Products, Royal City, Wash., are about 1/8th-inch diameter and 1/2-inch long for use in seeding and fertilizing equipment.

ing or fertilizing each field.

The cost of materials, hauling and spreading is at least 90 percent less with pellets than bulk compost in dryland wheat application, he said.

Compell provides nutrients but it also provides organic matter that regular fertilizers don't have that compliments fertilizers and provides water holding capacity and a diverse microbiology that boosts yields, he said.

"We see healthier plants, increased tillering, better head development and evidence of disease suppression," he said.

The company contracted with Clapperton for independent validation of field tests showing 20 to 24 percent increased yields in wheat when Compell is a supplement to full fertilizer applications. Yields have increased 31 percent in canola and 34 percent in barley, Schutt said.

A dry pea trial was wiped out by hail in Montana last year and a dry bean trial near Spokane met the same fate because of drought, he said.

"We're looking at those and other crops. While our customers are primarily wheat right now, canola and some barley, we will see where it goes," Schutt said.

It has huge potential, Graaff said.

Tree fruit and wine grapes are possibilities "because while the intent is precision application during seeding, the pellet works with fertilizer for almost any kind of agricultural application," Schutt said.

The company is offering Compell as Compro to the turf industry and for golf courses and municipalities.

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When cat food drives raccoons, and cowboys, crazy

By RYAN M. TAYLOR
For the Capital Press

Cowboy Logic

Ryan Taylor



TOWNER, N.D.— Our boys were into a series of books for a while that had titles like "Who Would Win? Tarantula vs. Scorpion," or, "Who Would Win? Komodo Dragon vs. King Cobra." They had a lot of animal education, some drama and a showdown. A fitting read for the Taylor boys.

We're working on what might be next in the series, "Who Would Win? Rancher vs. Raccoon." I'm not sure if anyone will buy it because they know how it'll end. It's not a fair fight.

I've been in that battle for a long time, but it's gone to a new level as I try to feed a little cat food to a growing herd

of cats we have on mouse patrol around the ranch yard a mile from our house. We prefer to keep the cat herd away from our front porch, so I feed them in the shop.

It started simple, filling a couple of empty coffee cans with cat food to leave in the shop so I could pour out a daily kitty ration in the cat trough. It wasn't long before I'd find the coffee cans with the lids pried off and the cat food polished off. Ring-tailed raccoon food bandits.

So I put the cat food in a plastic five gallon pail with a lid snapped on tight. I can

hardly get the lid pried off those buckets so I figured it would be safe. Nope. I think they tipped the buckets over, body slammed them and popped the lids.

One day I used the shop vacuum to suck up some cat food I found in the air intake of the pickup ahead of the air filter that must have been put there by mice for winter storage. Sure enough, the next day, the shop vac was tipped over with its top pried off and the cat food picked clean from the dirt.

Cat food must have the addiction of crack cocaine to these coons. I tried storing the cat food containers in the cab of my good loader tractor. They never got it, but the bottom of the door was covered with muddy coon prints.

They chewed and clawed off about two feet of the weather stripping, and got their dirty little paws through the crack trying to reach the latch with their opposable thumbs. It was not a cuss-free morning in the shed when I found the weather stripping chewed off of my good tractor. I don't put cat food in there anymore.

That's when I bought one of those live traps for raccoons. I'd have gladly used some leg hold or body traps, but that would have been too tough on the cats or the dog when he roams the shed. I caught one coon the first night, took care of him, but ended up losing a key piece, the trap tripper. The trap is still out of commission.

So, I found a cupboard with

a pretty strong latch for storage. They got into that. Now I moved the cat food it into an old file cabinet drawer that has a locking button on it. They sniffed it out, picked the correct drawer and have scratched and tried, but so far, haven't gotten the food. I'm guessing it's only a matter of time.

Next, I'm thinking of building some kind of box that I could secure with a combination padlock. I'll likely have to change the lock regularly as I am sure these coons could crack the code.

And, if you were wondering about the victors of the matches in the books mentioned at the beginning of this column? It's the scorpion, the king cobra, and, apparently, the raccoon.

Calendar

Saturday, June 20

Humane Chicken Processing Seminar, 10 a.m.-2:30p.m. Oakville Regional Event Center, Oakville, 360/858-1317. This seminar will describe humane methods for processing chickens using equipment that can be rented from the county extension office.

Wednesday, June 24

Importance of Beneficial Insects on the Farm, 1 p.m.-5p.m. Southern Oregon Research & Extension Center (SOREC), Central Point, 541-776-7371. Instructor: Gwendolyn Ellen, Integrated Plant Protection Center, Oregon

State University. Pre-registration is required. Visit our web site register on line at: http://extension.oregonstate.edu/sorec/farms

Friday, June 26

Forestry Shortcourse, 10 a.m.-1p.m. West Bonner Library, Priest River, 208-446-1680. This six-session program will help forest owners understand ecology, silviculture, wildlife and other topics. Register by June 5.

Tuesday, June 30

Poplar for Biofuels field tour, 10:30 a.m.-1p.m. Hayden Demonstration Site, Hayden, 253-241-5043.

Join extension professionals, researchers and environmental professionals, in learning about the latest biofuel and biochemical developments in the Pacific Northwest.

Wednesday, July 1

OSU Caneberry Field Day, 1 p.m.-5p.m. North Willamette Research and Extension Center, OSU, Aurora, 971-373-5912.

Friday, July 3

Forestry Shortcourse, 10 a.m.-1p.m. West Bonner Library, Priest River, 208-446-1680. This six-session program will help forest

owners understand ecology, silviculture, wildlife and other topics. Register by June 5.

Wednesday, July 8

An Introduction to Pacific Northwest Agroforestry Practices, 9 a.m.-3p.m. Willow Lake Watershed Treatment Plant, Salem, 503-391-9927. The workshop will focus on the topic of integrating trees and shrubs into an agricultural land use system to enhance productivity, profitability and environmental stewardship. Presentations will examine hedgerows and windbreaks, landscape ecology and agriculture, an intro-

duction to alley cropping, riparian buffers and wildlife habitat and agriculture. Please RSVP.

Wednesday, July 8

OSU Blueberry Field Day, 1p.m.-5p.m. North Willamette Research and Extension Center, OSU, Aurora, 971-373-5912.

Friday, July 10

Forestry Shortcourse, 10a.m.-1p.m. West Bonner Library, Priest River, 208-446-1680. This 6-session program will help forest owners understand ecology, silviculture, wildlife and other topics. Register by June 5.