



Woodville Pellets Cooks Fuel for Europe

by [Michael G. Maness](#) ~ [Tyler County Booster](#), 2-27-20, 2B.

South of Woodville and standing west off Hwy. 69, one sees the four large silver silos about 80 feet high next to the red building of Woodville Pellets.

Each holds 1,200 tons of finished pellets, small cylinders that are thinner than a pencil and about half-inch to one and a half-inches long. Their drab speckled brown color could be confused with cattle feed. A group of lawyers were visiting once, and a clueless one popped a few in his mouth and chewed. “They taste terrible,” he said, then found out their purpose.

Woodville Pellets is the largest of Graanul Invest’s 12 plants worldwide, based in Estonia. Throughout Europe, the pellets are used to warm homes or are re-pulverized to fuel power plants. Graanul Invest advertises as the largest producer of these 100 percent “natural renewable” sources of energy in Europe (GraanulInvest.com).

Plant Manager Bryan Davis and Production Manager Raul Pecina were gracious tour guides. They will offer tours to citizens and answer all questions.

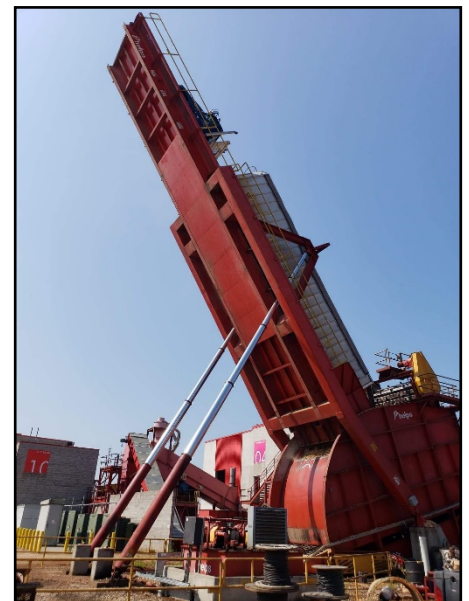
Actually and surprising, the recipe for these pellets is simpler than for a chocolate cake, though the cooking and final kneading are much more violent. Mix a good portion of powered wood, flour, water, then heat, press, and—voila—a pellet. Not that complicated.

From the highway, looking to the right of the four silver silos, the smaller white tanks hold the powdered wood and flour. They are mixed with a few dabs of water, but not enough to make a slurry, then cooked in a big pot that is heated from the plants own recycled bark and from forest debris. Nothing is wasted. The furnace is automatically fed from a pile behind the plant.

The chimney flue can reach 1700°F, and the exhaust is filtered.



Woodville Pellet Plant Manager Bryan Davis and Production Manager Raul Pecina stand in front of one of the 12 machines that churn out the pellets via a 1,600-lb die that spins at 900 rpms.



On a sunny day, it appears almost clear with white puffs, as on the day of my visit. On a cloudy day and at night, it appears black. This sophisticated system has a safety mechanism, like a fireplace with two flues. If the main filtered flue stops, the unfiltered bypass will open, and then the smoke is like a regular camp site or bonfire smoke, just a bit hotter. The bypass is only used in emergencies until things can be shut down and to avoid injury or costly repairs.

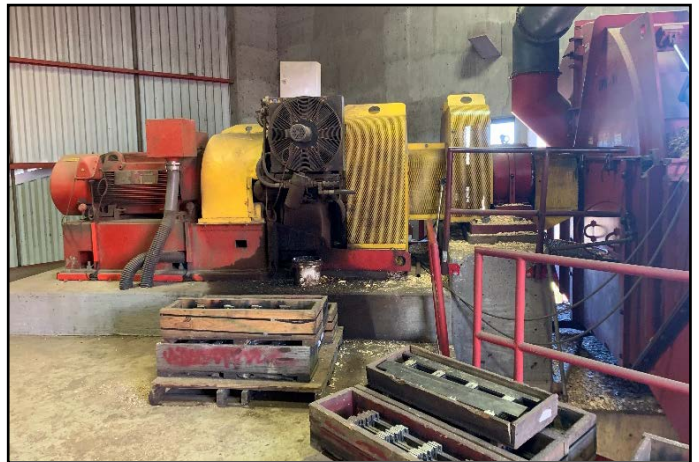


The whole process begins on the north end where the between 30 to 100 deliveries a day are made from Lonnie Grissom's North American Procurement Company. A gantry crane operates the Tyler-County-ubiquitous-logging claws that unload each truck weighing just under 80,000 pounds each. The logs are fed into a 100-foot cylindrical debarker—just like the ones that operated there for years when it was chipping mill. A heavy conveyer looks like several bicycle chains on steroids that feed the monstrous shredder.



The bark from these trees is added to other forest refuse that in turn fires the furnace.

The debarked logs traveling on those supercharged bicycle chains enter the most violent part of the operation. An operator sits behind a protected window and controls another logging claw that keeps the logs moving and keeps the logs from piling up too high or entering too fast. The operator tries to allow the conveyor to feed the voracious machine seven to ten logs at a time—steady, like your paper shredder and as fast—only these are large tree logs.



“Shredder” is an understatement. Two 750 hp electric motors spin 15 steel blades at 450 rpms. Each blade is about three feet long and maybe a half-inch thick. They felt as sharp as my pocket knife.

“How often do you have to change them?” I asked.

“Oh, about every three or four days,” said Davis. “We are looking at expanding and adding our own sharpening workshop.”



The chips travel on another conveyor to a large pile of refined chips. What looked like a pile was actually a two-story horseshoe around a hole in the ground. On one end of the horseshoe pile was a large machine that auto-rotated 360° around

the ever-growing horseshoe of chips. As the machine rotates around its axis, a 20-foot long rake gently oscillates to keep the chips falling into the center hole in the ground. From there the chips travel underground to a series of pulverizing hammers that pound the chips into dust. That wood-dust is stored in the smaller white silos next to the white silos of flour ready for the oven and kneading.



The control center is in the red building that monitors all of the activity, from the temperature of the flues, the loading and spinning of the machines, and over a dozen color cameras that keep track of every facet inside and out.

Chemicals? None in the pellets themselves, except wood, flour, and water! Environmental Officer Sarah Stephens rather flippantly said, “We have less MSDS sheets than Tractor Supply.” Material Data Safety Sheets are required by OSHA that describe the nature, danger, risks, and emergency protocols for every chemical. All big organizations must have them, and the best have them for every chemical, like Liquid Paper, every cleaning agent from Mr. Clean to Clorox, every paint and oil, and even copier and printer toner. Truly then, most of the garages in Tyler County have more “chemicals” than are present at the Woodville Pellets.

After heating, the recipe is kind of reversed from making a chocolate cake, for the next most violent action comes in the kneading—sort of speak. The hot dust-flour mix travels to six large bins. Each bin feeds two 1,600-lb “dies” that spin at 900 rpms. As these spin they are squashing the dust-flour mix under hellish pressure—kneading if you will—and churning the finished hot pellets into a vibrating pan that I suppose keeps them from sticking together. Then they pellets fall into another conveyor that transports them to one of the four huge silos seen from the highway.

They felt warm as I took a handful and—seriously—smelled tasty. Throughout, the smell was like the wood storage area of a lumber yard, or my garage after ripping a few 2x4s.

The bearings to these huge “kneading” dies need to be replaced, and local long-time saw mill fabricator Ronnie Pryor has replaced them at his Mill Master shop north of Woodville.

Woodville Pellets’ sizable contribution includes about 70 employees with a payroll of about \$200,000 a month, and they pay about \$400,000 a year in various taxes.

