



Plainview Growers Burn Energy Pellets in its Allamuchy Location

By TAMARA SCULLY

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Tuesday, April 20, was an important day at Plainview Grower's Allamuchy branch, a 200-acre facility featuring 7 acres of greenhouse growing area, plenty more space for the production and shipping of the 160 million plugs which leave the facility each season, and outdoor space for finishing plants. The two 250-ton silos in the back might look out of place here, but for now they are taking center stage, as Plainview Growers prepares to begin filling them with renewable energy pellets made from warm season grasses to provide the fuel needs for the facility.

In conjunction with Rutgers University, Arie Van Vugt, president of Plainview Growers, has been researching alternative energy grasses for the past year or so. He is now ready to make bio-energy from grasses a reality, for Plainview Growers and beyond.

A separate building, down the dirt road from the greenhouse and past the acres of outdoor growing area, contains some odd-looking machinery, which has been waiting for this day, the day it produces the first batch of grass pellets, to fill the silos and fuel the bio-fuel boiler, which until now has run on wood pellets. You've now entered Pequest Energy Inc., although you haven't really left Plainview Growers, because this grass pellet making machinery represents the start of Pequest Energy, a new bio-energy company which grew out of Van Vugt's quest to become energy independent.

Pequest Energy will begin by supplying grass pellets for the Allamuchy branch of Plainview Growers, and ultimately provide fuel in the form of grass pellets for retail sale to others. The fields beyond are slated for the production of perennial Miscanthus and switch grasses — the final variety still to be determined — which will be cut once per year to provide the raw material for the bio-fuel pellets.

Van Vugt admits that it all started when the cost of oil began to skyrocket, and it became harder to keep the profit margin holding steady as costs to heat the greenhouse escalated.

"I never gave alternative energy a thought," Van Vugt said. It's pretty much all he thinks about, now.

"Allamuchy will be 100 percent energy independent this coming season," Van Vugt said of the Plainview Growers branch. "We are purchasing energy grass from local farmers and providing our own fuel."

Plainview Growers will be using grass pellets, made from the grass crop of nearby farmers, who began growing

warm season grasses as part of a New Jersey Audubon program to protect grassland birds, to heat the greenhouses. Although they do have the oil burners as a back-up, the current boiler, which has been burning wood pellets for the past year or so, can handle 80 percent of the energy needs of the facility.

The equipment to turn grass cuttings into burnable pellets, with the optimal 15 percent moisture, was purchased from an energy equipment dealer, but customized to meet the specific needs of grass pellet production. The pellets will ultimately have to meet the standards of the pellet fuel industry if they are to be resold. For now, it's a "test and trial year," and the pellets will be burnt onsite until the system is optimized and Plainview Growers is fully using bio-fuels.

The pellets all start with bales of hay, cut from the warm season grasses. The perennial grasses, Van Vugt said, can be cut this way for 20 years or so, before needing to be replanted. The hay is pulverized and turned into a sawdust-type product. It is then travels through the bucket elevator, and is heated to 200 degrees, transported to the pellet mill and formed into pellets. The pellets are then cut to length, and ultimately travel through a cooling tower and into a dump wagon, which transports them to the silos for storage.

From the silos, the pellets travel via pipeline into the boiler, which burns the pellets, heating the greenhouse. One pellet boiler can provide 80 percent of the greenhouses fuel needs. The old No. 2 fuel oil boilers are on standby, and a computer will automatically switch over to oil if the pellet boiler reaches less than 25 percent capacity. The silos can hold two-thirds of a season's fuel needs, Van Vugt said, so the goal is to go into the season with full silos, and produce more pellets to keep the supply going.

But it doesn't stop there. "The goal is to be able to use the same boiler and same fuel, but spin a turbine to produce our own electrical energy," Van Vugt said. Within two years, the facility, as home to Pequest Energy, will not only be growing its own renewable fuel, making bio-pellets to heat the Plainview Grower's Allamuchy greenhouse, and producing enough grass pellets to sell to others, but it will also be generating electricity using this same bio-fuel, allowing Plainview Grower's facility to be energy self-sufficient, relying only on the bio-fuels produced on-site.

The goal: "a consistent fuel cost," Van Vugt said. Energy independence via renewable bio-fuels is the path Van Vugt has chosen for Plainview Growers and Pequest Energy to navigate.

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