WINES & VINES

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Value From Pomace

Finger Lakes energy company will recycle winery waste for food, fuel and mulch.

by Hudson Cattell and Linda Jones McKee

This winter, Seneca BioEnergy constructed a pole barn to serve as a receiving area for the pomace it will process into grapeseed oil, biodiesel fuel and manufactured soil.

Romulus, N.Y. -- The price of gas goes up; wineries produce tons of waste in the form of pomace. What do the two have in common? Plenty, according to Michael Coia, CEO of Seneca BioEnergy in Romulus, N.Y.

The company, which Coia described as an agricultural processing and renewal energy company, plans to take pomace and other vegetative material and convert it into three products: grape seed oil that can be sold as a health product in winery tasting rooms and to restaurants and specialty shops; biodiesel fuel that can be used in tractors and other vehicles; and manufactured soil that can be returned to the land, including vineyards, as soil replenishment.

It's a win-win-win situation--wineries benefit from the removal of pomace; the

community benefits from locally produced biodiesel fuel; and the environment benefits from a vineyard waste management program.

Seneca BioEnergy LLC is using two former army depot warehouse buildings on a 55-acre site in Romulus for its AgBio facility. The installation is a green energy production complex, and biomass materials such as waste wood, switch grass and willows as well as pomace will be used to make cellulosic ethanol. A pole barn has been constructed on the site that will serve as a receiving and shipping area for delivery and unloading of biomass materials. The biodiesel equipment is currently being fabricated and will be installed on site.

The grape seed oil part of the business will begin with the 2009 harvest. Seneca BioEnergy will pick up pomace from wineries within a 70-mile radius of the plant at no charge to the wineries. An ideal source would be a medium-size winery in the Finger Lakes that processes 30-50 tons of grapes. The pomace will be dried and the seeds physically separated from the pomace using conventional specialized screening equipment. An air dryer is used to dry the seeds to prevent them from molding prior to crushing.

CEO Michael Coia's new efforts will result in a win-win-win situation benefiting wineries, their communities and the environment.

The intrinsic value of the grape seed oil is $45.00 per gallon as opposed to $3-$4 per gallon for biodiesel fuel. The dried pomace, which contains nitrogen, phosphorus and potash, is valued at $20 per ton as manufactured soil, and can be returned to a vineyard to replenish topsoil or simply bagged up and sold as potting soil.

Seneca BioEnergy estimates that it can use up to 5,000 tons of pomace annually, and is currently making arrangements with wineries for the acquisition of pomace from this fall's harvest. Production of biodiesel fuel will begin in the fall of 2010, starting with 3 to 5 million gallons the first year and moving up to 15 million gallons by the third year. An affiliated company will produce biodiesel fuel at a second site in Northumberland County in central Pennsylvania north of Harrisburg. The biomass materials at that site will be soybeans, which are plentiful in that part of Pennsylvania.

Seneca BioEnergy will be bottling grape seed oil for winery tasting rooms, but the thousands of gallons it plans to produce will require regional distribution, primarily to restaurants. Negotiations are underway to sell the production through the Regional Access distribution network in the Finger Lakes.

The main office of Seneca Bioenergy is located at the Cornell University Agriculture & Food Technology Park in Geneva, N.Y., which was created to provide an innovative environment where businesses could leverage the knowledge base of Cornell, including the New York State Agricultural Experiment Station.

Coia, a civil engineer who graduated with an M.S. in environmental engineering from Duke University, has been involved in consulting and construction work on environmental clean-up projects for the past 30 years. He may be contacted by mail at 500 Technology

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