

Our Experience Integrating Biodiesel into Farm Management

BY
Lino Bozzano
Vineyard Manager
Laetitia Vineyard and Winery

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Laetitia Vineyard and Winery is a vertically integrated farming company that farms 1400 acres of winegrapes in Santa Barbara and San Luis Obispo Counties. In addition we have 4 wine brands. Laetitia, Nadia, Barnwood, and Avila. We use all estate grown grapes and we also sell grapes.

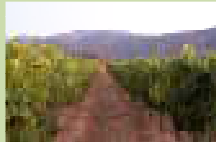
Our Vineyards

Laetitia Vineyard-620 Acres

435 acres Pinot Noir
86 acres of Chardonnay
65 acres of Pinot Blanc
25 acres of Syrah
Small amounts of Tempranillo,
Pinot Grigio, and Reisling.

Santa Barbara Highlands Vineyard

750 Acres of Cab, Merlot, Cab Franc, Sauv. Blanc, Syrah, Mourvedre, Grenache, Grenache blanc, Viognier, Roussanne, Pinot Noir, Chardonnay, and Zinfandel



Important dates in History

- 1898- Rudolf Diesel demonstrates his engine at the Exhibition Fair in Paris, France. The engine ran on Peanut Oil
- August 31, 1937-G. Chavanne of the University of Brussels was granted a patent for a "Procedure of the Transformation of Vegetable Oil for their Use as Fuels"

Important dates in History

- Dec 2006- Laetitia Vineyard and Winery Receives its first commercial shipment of B99 Biodiesel



What is Biodiesel

- Biodiesel is the name of a clean burning alternative fuel, produced from domestic, renewable resources. Biodiesel contains no petroleum, but it can be blended at any level with petroleum diesel to create a biodiesel blend. It can be used in compression-ignition (diesel) engines with little or no modifications. Biodiesel is simple to use, biodegradable, nontoxic, and essentially free of sulfur and aromatics. (www.biodiesel.org)

Sources for biodiesel include, restaurant grease, algae, and crop oils

Why are we using Biodiesel

- As a company we are very committed to sustainability and protecting the environment.
- We like to promote a healthy work environment.
- We wanted to learn something.

How are we Protecting the Environment?

- A blend of B20 reduced total hydrocarbons by up to 30%, Carbon Monoxide up to 20%, and total particulate matter up to 15%.
- Pure biodiesel does not contain sulfur and therefore reduces sulfur dioxide exhaust from diesel engines to virtually zero.
- Department of Energy has found that biodiesel production and use, in comparison to petroleum diesel, produces 78.5% less CO2 emissions.
www.biodiesel.org

How are we Promoting a Healthy Work Environment?

- Biodiesel has decreased levels of all target polycyclic aromatic hydrocarbons (PAH) and nitrated PAH compounds, as compared to petroleum diesel exhaust.
- PAH and nPAH compounds have been identified as potential cancer causing compounds.

What did we learn ?

- No loss of power or negative impact on our farm machinery
- The shop in the morning smells like warm canola oil.
- There are some economic impacts.

Economic Impacts

- B99 Biodiesel on average was 20% more expensive than off road diesel.
 - 35 cents a gallon. By applying for a "off road" usage this comes down to about 15 cents a gallon.
 - As a total farm operating expense, B99 will increase our cost to farm by 0.15%.
 - Depending on your fuel budget this can add up.

Economic Impacts

- Similar price fluctuation to Petroleum Oil
- No Immunity to shortages
 - We still keep diesel on hand so we aren't too vulnerable
- Marketing Advantage
 - Press Release, consumer preference
- Equipment Life
 - Some research to suggest that the high lubricity of Biodiesel will extend the life of your engines.

Conclusion

I think for anybody wanting incorporate Biodiesel into you farming practices it is safe and risk free.

