

Joe Zanger Presentation

June 28, 2006

Energy in Ag: Managing the Risk Conference

- **Introduce myself**
- **Background on my family operation**

Speaking Points

With the rising costs of energy, labor shortages, stringent regulations and diverse opinions on biotechnology California producers are seeking creative solutions to continue to plant and harvest specialty crops while at the same time maintaining profitability.

I would like to share with you today some examples of how California producers are finding and utilizing innovative technologies to stay on top of the profitability curve.

Harnessing the power of the ever-abundant California sunshine is one way that some farmers are reducing their energy costs. Solar is a clean source of energy with no adverse emissions.

Pat Richutti – Fresno County California

In Fresno County, California Pat Richutti grows almonds, apricots, grapes, nectarines, peaches and many other crops. Last year he completed the installation of one of the largest, privately financed solar-energy systems in the state.

With the 7,730 solar panels on top of his 150,000 square foot packinghouse Richutti's 928 kilowatt solar system supplies enough electricity to power 50 percent of his packing facility which processes about 1.5 million boxes of peaches, apricots, plums, nectarines, apples and oranges a year. That amount of electricity is enough to power about 216 homes.

This \$6.4 million project would not have been possible without the Pacific Gas and Electric Company incentive program, which provided a 50 percent rebate on the projects total cost. And although it will take about 11 years to recoup these initial investment costs Richutti felt it a good investment to bring down his energy bill which in typical years tops \$1 million.

Steve Shafer – Madera County California

Steve Shafer a wine grape grower in Madera County California is using a 35-kilowatt solar system to power his 120-acre vineyard and home. He situated the 3,000 square foot solar panels on a pasture next to his vineyards so he would not have to sacrifice any grapevines. His system produces enough energy to supply 80 percent of his needs.

PG&E gives him credit for energy he is generating and not using which means he is able to bank that power and use it at a later time without paying for it.

One drawback of this system is that as a grower he had to carefully analyze the average amount of power he used in a year to build his system capacity accordingly. PG&E does not compensate farmers for any extra power they produce. Farmers instead receive a credit based on retail rates for the extra power.

For Shafer who was used to paying \$10,000 to \$11,000 in power bills a year the new \$2,000 bills are a welcome sight.

John Bargetto – Santa Cruz County California

John Bargetto whose family grows wine grapes in their Regan Vineyards in Santa Cruz County California recently completed a 3-kilowatt solar installation to offset 200,000 pounds of carbon dioxide production at a local natural gas power plant over the next 25 years.

By converting sunlight into electricity Bargetto is able to power the pumps to run water to some of the grapes for his Bargetto Family Wine.

The panels absorb sunlight, which is eventually turned into electricity that feeds into nearby utility poles hooked up to PG&E's energy grid.

Fetzer Vineyards Hopland California

Last week in the technology publication the Red Herring I read that Fetzer Vineyards is starting construction on a 901-kilowatt solar array

atop its bottling facility. When complete this will be the largest grid so far at a vineyard in the United States.

In addition to solar, the company also uses biodiesel in all its tractors and trucks and employees use electric vehicles to get around the vineyards.

The Bottom Line

As a specialty crop grower I look forward to the opportunity to be a part of the solutions that include new energies such as solar, biodiesel and ethanol. However any investment in new technology has to first and foremost be financially feasible.

The very fact that there are few tangible examples of on farm energy generation makes the point that the solutions are not yet available.

Under existing public energy policy, existing energy costs (although high and getting higher) and available technology, there is so far not much opportunity for individual growers to manage energy cost and availability risks. Like almost anything else, the solutions do not become available and affordable until there is crisis. With \$70/barrel crude, alternative energy starts to look attractive or at least as good.

The ironic part is that energy costs have to get unbearably high to first create the demand for technology for alternative energy and then stay high to continue the demand. For example, there has been much interest recently in Brazil's self sufficient ethanol industry. But the reason it works is because the high price of oil and it's state-imposed pump price for fuel includes much higher taxes than the price U.S. consumers pay. Gas in Brazil now costs the equivalent of \$4.69 per gallon. Pure ethanol — taxed at slightly lower levels and cheaper to produce — goes for about \$3.59 per gallon. Prices need to be in this range for the economics to work. So costs are not coming down. We need to find a way to live with it. Higher food costs to the consumer with pass through to the grower is what it always comes back to.

I would advocate that we all push for tax incentives, research funding, net metering regulation and rebates so that it does pen out for all of us to utilize renewable energy technologies in our own operations.

With the development of the new Farm Bill now in progress, we have the opportunity to voice our concerns to ensure that funding for developing energy efficient technologies is available to all producers.