

Future of farming tech

By John Miller

Staff Writer

Farming is not the same business as when your dad or granddad did it. An explosion in computer and chemical technologies has shown the way for groundbreaking new techniques to operate a farm. And to that end, the University of Wyoming's Sustainable Agriculture Research and Extension Center (SAREC) near Lingle held a field day last week

with tours of the facilities dryland crops, irrigated crops and livestock.

Included in the tours were the use of winter annual peas as a complement to winter wheat; management of herbicide-resistant kochia; disease resistance in sugar beets and potatoes and weed control in dry beans with Valor herbicide.

After the tours, researchers gave presentations about melanoma (skin cancer) and wind

turbine energy, as well as demonstrations of a solar and wind-powered livestock watering system, a camelina seed crusher and a bioreactor for making one's own diesel fuel.

Don Randall of the Wyoming Business Council was on hand to explain the virtues of the bio-diesel product and show his support for the college's research.

"Nothing against the

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older folks," Randall said. "But tradition says I'm gonna do it this way and I'm not gonna change. The chemistry and chem. 2 classes (at the college) are all full because of these projects."

Randall extolled the virtues of the bio-fuel, called B-100, commenting that it was garnering attention as an alternative to jet fuel.

"If you had 100 acres," Randall said, "depending on the oil seed your drawing and the efficiency of the crusher and the bio-reacting, you could make 900-1000 gallons of B-100 to burn, or add to your diesel to extend it eight times."

B-100 can be made from canola, safflower or sunflower oil, as well as used vegetable oil obtained from restaurants. It can be blended down to B-20, or even B-5, and used as an additive.

"For those of you who do drive diesels, you realize that diesel is the worst fuel you can put in your tractor; there is absolutely no lubricity," Randall said. "I've run B-20 in my Dodge pickup since last July and had no problems."

University educator Milt Geiger pre-



Photo/ John Miller

A Bioreactor for producing small amounts of B-100 was featured at the event.

sented the solar and wind-powered livestock watering system, a self-contained unit capable of pumping 8,500 gallons of water a day. A product of the University of Wyoming College of Engineering and Applied Science, the unit's four solar panels generate 170 watts each, while its wind turbine generates 400 watts.

"It really makes sense to water livestock with solar and wind energy," Geiger said. "And it's just as durable and reliable as if you were getting power from the power pole."

The savings inher-

ent with the system aren't solely limited to energy saving either. As long as such a system doesn't exceed federal energy limits to become classified as a bulk supplier, the owner is eligible for a 30 percent tax credit as well as the ability to depreciate the cost of the system. It not only saves money, it creates an asset.

According to presenter Randy Weigel, Wyoming ranked third in the nation in deaths per capita from melanoma from 2000-2006, and there were more cases of skin cancer in Wyoming than prostate, breast, colon and lung cancer combined.

Several factors contribute to this, among them the abundant sun and the altitude in Wyoming, and the wind, which blows away pollutants, all allowing for more intense UV rays. Most susceptible are people with fair complexion, freckles and a genetic propensity towards burning or blistering.

Some ways to guard against melanoma are to wear loose-fitting, long sleeve shirts, sunglasses, wide-brimmed hats and sunscreen of a concentrate SPF-15 or greater when one has to be outside in the sun between 10 a.m. and 4 p.m.