

Cooking oil fuels the University farm

Bulldog Biodiesel collects used cooking oil and converts it into environmentally-friendly fuel

BY MICHELLE MARTIN
Staff Reporter

Local restaurants and Truman's University farm have teamed up to clean up the environment in a surprising partnership forged by Bulldog Biodiesel.

During the past year, Bulldog Biodiesel has been collecting gallons of used cooking oil from Kirksville restaurants and turning it into biodiesel. The biodiesel then is used to fuel equipment on the University Farm, said senior Josh Hirner, who manages Bulldog Biodiesel. This process not only saves money, but also is more environmentally friendly.

"[Biodiesel] burns a lot cleaner than traditional petroleum diesel just because of the chemical structure," Hirner said. "It tends to burn more efficiently and emits fewer pollutants."

Using biodiesel instead of regular diesel reduces greenhouse gas emissions. The fuel is biodegradable and nontoxic and uses resources that would otherwise be thrown away, according to the U.S. Department of Energy.

"Traditionally, this waste is placed in a landfill or even worse," Hirner said. "Some of these companies that run these restaurants have to pay other companies to come collect their oil, so right now they're very happy to give it to us."

Members of Bulldog Biodiesel collect used cooking oil from area restaurants including the Manhattan Café, the Dukum Inn, Sodexo and the Wooden Nickel, Hirner said. Last semester they collected 590 gallons of oil, an average of 200 gallons each month. They combine the oil with chemicals in a processor at the University Farm and wash away any impurities. The process takes about 48 hours and produces roughly the same amount of biodiesel as the amount of cooking oil used in the process, Hirner said.

Bulldog Biodiesel purchased and installed the \$10,000 processor about a year ago.

"The first year we had to go through was convincing everyone that we could actually do this [and] that it was feasible for a bunch of students to do something this big," Hirner said. "It required a



Mayank Dhungana/Index

Senior Josh Hirner collects cooking oil from area restaurants to convert into biofuel, which burns cleaner and more efficiently than diesel.

pretty big investment."

The processor saves money every day for the University. Kirksville diesel prices currently rest around \$2.15 per gallon, but biodiesel rarely costs more than \$1.40 per gallon to produce, Hirner said. Additionally, it is 10 percent more efficient than diesel, which means that a gallon of diesel equals 1.1 gallons of biodiesel. Since the farm uses approximately 2,000 gallons of fuel each year, biodiesel

probably will produce substantial savings for the farm. Additionally, biodiesel helps businesses that would otherwise pay to dispose of their used cooking oil save money.

Hirner said Bulldog Biodiesel will host a seminar Feb. 10 at the Department of Conservation headquarters south of Kirksville for anyone who is curious about the process and benefits of producing biodiesel.

"It's a great opportunity to learn more about biofuels," Hirner said. "What we're going to do is give a nice overview of biofuel — [its] advantages, disadvantages — but I think what's going to be the most interesting for people is to see how biodiesel is made."

Those who attend the seminar also will have the chance to make their own vial of biodiesel, he said.

Junior Jessica Kobby, secretary of Bulldog Biodiesel, said students who want to contribute to an environmentally-friendly cause should think about joining the organization.

"We are really flexible," Kobby said. "We meet about once a month and it's not that huge of a time commitment. Pick-up takes two or three hours. You can do it once a month, twice a month."

Picking up oil involves visiting Sodexo and local businesses that regularly donate oil, she said. Students also can pick up oil for scholarship hours.

Kobby said she hopes the group will receive grants when they send members to Jefferson City later this month to speak to the governor and state representatives about the benefits of biodiesel.

"We need [to purchase] chemicals to run the reactions, and it's always good to have more barrels," she said. "It will allow us to expand."

University Farm manager Bill Kuntz said he thinks that as the organization grows, the University could expand its use of biofuel, because most equipment potentially can run on biodiesel.

"Anything that burns diesel has a diesel engine [that] will run on biodiesel," he said.

Recently, the cold weather has been causing the biodiesel to gel, making it less efficient than regular diesel fuel during winter months. Bulldog Biodiesel is working to discover additives that will keep biodiesel from gelling in the cold.

However, complications generally remain small, thanks to the simple design of the processor, which can be run by any student, Kuntz said.

Kuntz said he thinks that although the biodiesel project required an initial investment, the University will benefit financially in the long run.

"We're using a resource that basically is waste, and we're taking that waste and using it for something we would have to purchase, ... which is a good thing," Kuntz said.

Students warned to protect their computers from viruses

BY AMANDA GOESER
Staff Reporter

A recent computer virus outbreak is reminding students to check their current anti-virus software.

A computer virus known as Conficker, has infected computers nationwide. Tim Mills, Information Technology Services Help Desk Manager, said that they have not seen any cases of Conficker, which shows no common symptoms among affected computers, at the Truman Help Desk.

This virus is not all that new — Microsoft released a security bulletin in October about the virus and recommended

that customers install an update to protect themselves.

ITS Network Manager and Interim Technical Director Jim McNabb said McAfee and Clean Access Agent, which are supplied to Truman students free of charge, should keep students protected.

"The one function of Truman's Clean Access Software is to try to ensure that people do keep their systems patched with the latest Windows Updates and that they do have an approved anti-virus package installed and up-to-date," McNabb said.

McNabb said there are numerous ways for a computer to contract a virus, like Web sites that misdirect users, pop-

up advertisements that encourage viewers to protect themselves, and e-mails attachments from unknown senders.

"[The] worst-case scenario [is that] they could possibly destroy your hard drive and you would lose all your data," he said. "That's what they were designed to do. Another sort of worst-case scenario is that there are some viruses that are designed to try to extract personal information. ... Their intent is to try to get ahold of your personal data and report it back to criminal elements who are then going to either attempt identity theft or attempt to use your accounts for illegal purchases."

Because updates were available in

October that included protection against the Conficker virus, McNabb said most people probably have updated already and are protected.

Mills said a few computers have come in since Winter Break with viruses. One of these viruses will redirect any Web address to the Web site 7.7.7.0.

"It will install what is called a root kit that embeds itself in system files that can't be cleaned," Mills said. "We have actually had to recommend [that] people reinstall their operating system because even if you did clean it, there is still the threat where you don't know what else the hacker has done to the machine."

Junior Price Tipping experienced a

virus about a year ago that would copy itself to other places on the computer as his anti-virus software would find and delete the previously planted bug.

"It replaced my desktop picture with an image that said, 'You have a virus on your system — go to this Web site and download an anti-virus program,'" Tipping said. "If I had actually gone to that Web site, the anti-virus program would have been further [infected with] viruses."

A Microsoft spokesperson said via e-mail that if anyone thinks they are at risk for one of the recent viruses, there is a Malicious Software Removal Tool on Microsoft.com.

Classifieds

Rates: On-Campus: \$3 per ad/ Off-Campus: \$5 per ad

For Rent

For Rent: Wagner Enterprises rental properties are available for 2009/2010 lease. New units from one to four bedrooms are all within two blocks of campus! Complete with washer/dryer in each, all electric, central heat and air, private parking, and maintenance staff. For more information call: 660-627-5437.

For Rent: Three-, and four-bedroom houses. Within walking distance of campus. All newly remodeled. Available May 1. Contact 660-216-3803.

For Rent: Great one-bedroom apartment right next to campus, \$325! Others just a little further away, \$258. Call 660-627-2060,

For Rent: Three-bedroom apartments from \$500 to \$650 a month, water/trash included. 660-216-1179

For Rent: Two-bedroom apartment available for sublease(s) May 15 to Aug 15 (can be discussed). Central air, washer/dryer, and close to TSU. \$530/month, but can be negotiated. Call 314-368-8057 for information.

For Rent: Foxfire townhouses Two-bedrooms, all electric, water & trash paid, stove, refrigerator, wall unit a/c, off street parking, \$450 units with w/d hookups, \$475 units with washer & dryer. Leasing now for May, June, July & August 2009. Call Ken Read, Owner/Broker 660-626-5488 or Heritage House Realty 660-665-5638 or view rentals at www.kirksvillerealestate.com.

For Rent: Available exceptionally nice four-, five-, and seven-bedroom houses for '09-'10 school term. Beautiful kitchen, large bedrooms. All appliances, including washer/dryer. Walking distance to campus. Pets allowed upon approval. 660-665-3779

For Rent: One-bedroom apartment. Refrigerator, stove, water/trash furnished. No smoking, pets, parties. \$325 lease plus deposit. 314 N. Florence. 660-665-6884

For Rent: Four-bedroom homes with nice appliances, high efficiency furnaces and central air. Some hardwood floors, new carpet & vinyl in all, clean, close to TSU campus with plenty of off-street parking. Our rents have not increased in 10 years but have been lowered. No pets allowed. For more information call Larry, owner/agent 660-341-0941 or 660-627-4761. Available May 15.

For Rent

For Rent: One-, two-, and three-bedroom houses and apartments for rent. 660-216-1794

For Rent: Spacious two-bedroom apartment available to sublease(s) for summer 2009. On-site laundry, appliances include dishwasher and microwave. Comes semi-furnished at \$465/month. Other expenses include water, electricity, and internet (if desired). Walking distance from campus in Waterworks building 704. Call 314-808-4766 for more info or a showing.

For Rent: Nice two- and three-bedroom units in the Water Works, Boardwalk, Park Place, St. James, and New York apartments. All within walking distance of Truman. Call Four Horizons, Inc. at 660-665-3400

For Rent: One to two-bedroom apartment approximately two blocks from TSU. All utilities included. No Pets. \$350/month. Available Aug 2009. Call Corey Sanford 660-665-9848 or leave message.

For Rent: Cable included! Washer and dryer included! 2 bedroom, 1 bath, total electric, central Air, dishwasher, stove, refrigerator,, in brick 8-plex close to campus, all for \$450. Call Kirksville Property Management at 660.665.6380

For Rent: White Apartments- two-bedroom apartments, just two left! Call 627-2060 for more information.

For Rent: Downtown apartment! 4 large bedrooms next to the new Pickers Famous! \$800 Call Kirksville Property Management at 660.665.6380

For Rent: need lots of room? This large 2 bedroom upstairs apartment offers new carpet & interior paint plus updated bath. Total electric, and located just off the square within walking distance of TSU and kcom. \$425.00 Month-lease/deposit required. No pets. Broker/owner 660-341-1934.

For Rent: One-bedroom efficiency apartment. Stove/refrigerator, water/trash furnished. Off-street parking. \$265/month plus utilities. Available Aug. 1. 660-216-1952 owner/broker

For Rent: Three-, to four-bedroom apartment, one and a half block from campus. Central air, washer/dryer, off-street parking. 660-341-1805. Also, two-bedroom apartment in complex.

For Rent

For Rent: Four-bedroom home, two bath/shower, washer/dryer, big kitchen, new appliances. Huge living room and dining room, hardwood floors. Close to TSU. \$725/month. This house is huge. May 2009 lease. Pets welcome. 660-216-1445

For Rent: Call Kirksville Property Management for apartments, condos, houses, duplexes. Many close to campus. 660.665.6380 or check out our web site at www.KirksvilleProperty-Management.com

For Rent: Sublease(s) for second semester only. Gather a few friends for exceptionally nice home. All appliances, including washer/dryer. Also, very nice four-bedroom house within walking distance, at discounted rate. 660-665-3779

For Rent: One-, two-, and four-bedroom houses and apartments. New carpet, and no pets. 660-342-5585 before 5 p.m. or 660-627-5917 after 5 p.m.

For Rent: Exceptionally nice one-, two-, and three-bedrooms houses for the next term. Some with new cabinetry and carpet. Some walking distance from campus. Pets allowed upon approval. Deposit holds. 660-665-3779

For Rent: Nice house! Four-bedroom, 2 1/2 bath, located near TSU and KCOM on a quiet street. Great for family or rental. \$84,500. Contact 636-734-2140 or 217-553-6154 for more details.

For Rent: New two-bedroom duplex apartments. Near downtown. Walk-in closet, washer/dryer, dishwasher, refrigerator, range, central air, garbage disposal, outside storage. May and Aug availability. \$400. 665-2796, M-F 8-5.

For Rent: Cozy two-bedroom, one bath house close to TSU. This home has hardwood floors, carport, washer/dryer, and central air. Available May 2009 for \$425/month. Call Jeff Behrmann owner-agent 660-626-7598 or visit www.housesinkirksville.com

For Rent: Five-bedroom, two kitchens, two bathrooms, large yard, spiral staircase, \$210/person. 660-216-1794

For Rent: Two-bedroom house on Jefferson. Large bedrooms, great space. \$500/month. 660-216-1179

For Rent

For Rent: Exceptionally well-maintained two-bedroom, affordable apartments available for May, June and August, 2009 leases. Amenities: Refrigerator, range, washer/dryer, dishwasher and disposal, central air, all-electric, large walk-in closet in master bedroom, off-street paved parking, snow and ice removal and security light. Located in an established residential neighborhood, this complex is ideal for the person who prefers a quieter surrounding with only a 5 minute commute to Truman or ATSU. Please call 660-341-4227 for details.

For Rent: New three-bedroom duplex apartment. Two full baths, two walk in closets, off-street parking, refrigerator, range, dishwasher, garbage disposal, washer/dryer, central air, outside storage shed. Available June 8, 2009. 802 N. Green. \$600. 665-2796. M-F 8-5

For Rent: Attention professional students: Multiple high quality two- and three-bedroom modern affordable apartments with countless amenities available immediately, currently available for May 2009, June 2009, and August 2009 leases. Locations are all in an established "safe" residential/rent progressive area of the city. This beautiful complex is all electric (no gas price fluctuation or asphyxiation worries) and is geared for professional conscientious individuals who place a high emphasis on safety, privacy, and an attractive surrounding less than 5 minute commute from campus. Please call 626-7695 for details. Student references gladly given on request.

For Rent: Nice two-, and three-bedroom apartments only \$360 to \$450. Well maintained. Coin laundry on site. Call 627-2060

For Rent: Two-bedroom house available near university. \$390/month plus utilities. \$450 deposit. Call 660-665-7186 after 5 p.m.

For Rent: Vista Heights. One- and two-bedroom units still available. Call Kellie Nigh at 665-9224 or 626-3914

Wanted

Wanted: Would like to lease a horse to mature individual who has an interest in riding and enjoying horses. Reasonable contract. Tina 660-216-0777.

Wanted: sub leaser, one-bedroom, water included, \$320 660-216-1794.