

Get those trees out of my way! Can't you see I'm driving here!

Summer came and went this year under a cloud of politics and hype from the industry and administration. Alternative fuel and renewable energy are fast becoming a catch phrases which spew as easily out of the mouths of politicians as their overused cousins like "right to life" and "war on terror" and "homeland security" who could ever oppose these fine ideals? Recent statements from oil executives to the effect of "It would be immoral to use food for fuel as long as there is one starving person on the planet" and "we are working on making ethanol from wood pulp" are fashioned to lead the public to believe that these monsters care about anything but money, since when does one listen to a morality lesson from an oil executive? With a new under sea oil field the size of which has never before been "fathomed" by mere mortals the new company line leads us to believe that we should not worry about oil running out when we haven't even tapped the bulk of this vast resource, there will be fossil fuel for generations to come, so get out there and buy that new massive SUV now! And remember once the environment is completely trashed you will plenty of gas to drive your Hummer over all of the wreckage. New bumper sticker ideas:"Honk if you love extinction" and "Friends don't let friends drill and drive".

By Ethan Fox YBDC Member

Cool Air and other thoughts from Eric Foresman

Weather you realize it or not, all of the Yoderville Biodiesel Club members are local heroes acting to reduce the risks of pollution, oil dependency, resource wars and global warming. Our efforts are a great example of the think globally act locally slogan. And it's not "just" a slogan at YBDC. Our members make it happen every time we choose to use recycled bio-diesel. Last year we produced and used little over 3,000 gallons of recycled fuel. According to the US Department of Energy 5.84 pounds of CO₂ is released to the atmosphere for every gallon of biodiesel

used. However, if those gallons had been petrol-diesel (dirty diesel) 26.55 pounds of CO₂ would have been released for every gallon used. That is a savings of 20.71 pounds per gallon (a 78% reduction in global warming pollution). Collectively we saved over 31 Tons of global warming CO₂ from entering the atmosphere last year. That is a big pile of carbon.

So how are we doing this year? Well we have saved over 24 Tons so far and we still have two months to go in the season. But we need to acknowledge the paradox of "savings" here. The fact is that the more you use the more you save with a simple gallon to gallon model that assumes all miles are the same and that

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we never have a choice to walk or take a bike (i.e., conserve). And we all know that it isn't a good thing to "save big" buying stuff you don't need on the home shopping network. So conservation is good and just because you "save" more carbon doesn't necessarily mean you are a bigger hero in this case, it just means you used more fuel. To set a personal goal for sustainability members should keep track of how much dirty diesel they use in a year and try and reduce both the percentage and total amount they use. That being said I think the reduction in global warming pollution each of us has made is astounding. Quite a few of us burn B100 every chance we can and when you think of all the pounds and of black carbon we are keeping out of the air we breath it is amazing. Here are the YBDC member's global warming CO2 reduction numbers for the 2006 season so far:

Avoided/Gallons/CO2

Ron	532	11,017 lbs (5.5 Tons)
Steve	420	8,698 lbs (4.4 Tons)
Ethan	326	6,745 lbs (3.4 Tons)
Eric	213	4,416 lbs (2.2 Tons)
Leo	190	3,935 lbs (2.0 Tons)
Don	162	3,353 lbs (1.7 Tons)
Kevin	159	3,284 lbs (1.6 Tons)
Stacy	102	2,112 lbs (1.1 Tons)
Jamie	88	1,827 lbs (0.91 Ton)
Dan	72	1,491 lbs (0.75 Ton)
Gail	25	518 lbs (0.25 Ton)
Mark	21	435 lbs (0.22 Ton)
Lucas	10	207 lbs (0.10 Ton)
Merrill	10	207 lbs (0.10 Ton)

Keep up the good work.

By Eric Foresman YBDC Member

A Production Report from Steve Fugate; President YBDC

Biodiesel production kicked off with a bang this spring due to the donation of a second processor by Flying F Biofuels. The second processor allows a much higher level of production but definitely keeps 1 operator busy! Glycerin separation has been radically simplified with the addition of 2 cone bottom settling tanks procured by Ron and installed by Kevin and Leo. This will cut down on the amount of Biodiesel being discarded as well as reducing the # of times the glycerin must be handled. We have recently initiated a project with the Johnson county landfill to compost our glycerin. The recycling effort should serve as a template for other groups to properly dispose of their glycerin. The installation of a 350 gallon dry system has also led to the ability to dry larger amount of fuel in a timely fashion. The dry tank is heated by the hydronic panels to reduce energy consumption.

By Steve Fugate YBDC President

Shifting Amenities of the Coop

This year marked a resounding growth in the organization's throughput and production capabilities. With the growth always comes the change (and growing pains) the first big change after the new concrete floor, was the new fuel drier consisting of a used liquid cooled milk trough, which Don promptly modified to be liquid heated via the heat exchange panels and leftover PEX tubing from the floor.

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Above: The new drier (right), PEX tubing in and out of the trough (center), and the pump and temperature monitoring (left).

The ability to heat the drier decreases the amount of time and energy required to dry a considerably large batch of fuel. The drier however was only the beginning of the changes taking place in the production area, Ron secured two large cone tanks and Leo built a very sturdy base for them to sit on.



Above: The two large new cone containers.

This advent enables us to brew many batches into large and for all intensive purposes, transparent settling containers intended for exactly that purpose. Now we can separate the glycerol far more accurately and efficiently.



Above: Wide angle shot of the current production facilities at YBDC.

The increased production has benefited coop members with greater availability of fuel for everyone, the fill station has been upgraded as well a new pump hose has been installed and those green batteries are new too. All these upgrades combined with a considerable increase in the price of methanol, has caused the



Above: finished fuel tank at YBDC the Co-op

appearance of that little paper sign on the front fuel tote it says something about higher fuel prices... Is no one safe from rising fuel costs?

By Ethan Fox YBDC Member

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The Collection Grid

The rapport on YBDC's collection activities

Welcome again to the segment regarding the state-of-collections for the YBDC. It has been all summer since my last confession, Leo and I have been doing the collections since Steve got busy in the late spring with Flying F Bio-fuels. We have continued to streamline the process of collecting waste oil as much as we can, whenever we can.

Earlier this summer we finally got a default configuration for the trailer (now the sole property of the coop).



Above: The collection trailer loaded up for collecting.

As you can see we usually carry five empty 55 gallon drums, the trash pump, the gear pump, and the diesel generator.



Additional on board equipment is a spill containment kit, brooms, and some basic tools. A note here regarding gear pumps.

A super big YBDC thanks out to Ron who made this new gear pump available to us just when the one we were using all year finally went down on us for the last count. Ron added to the pump housing, a toggle on/off switch and a very effective handle on top.



Above: The pump that Ron built! Thanks Ron!

Our future plans include gearing up to collect from the new equipment going in at the two University of Iowa dormitories we currently collect from, both Burge and Hillcrest are trading in their grease dumpsters for modern "waste oil recyclers" these vertical tanks allow settling to occur and keep the oil heated prior to collection to insure the best oil gets collected. The kitchen staff must use more stringent standards for the oil they put into the collectors than they did for the dumpsters, for instance the recyclers cannot handle water or solids therefore the waste oil must be filtered prior to disposal (good news for us!) Steve also mentioned that most new industrial kitchen installations include considerations for waste oil recycling like the units going into the dorms here in Iowa City are rapidly becoming standard kitchen equipment. This means that we can expect to be collecting only the finest waste oil in the future. We

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look forward to getting our “greasy paws” on all that oil.

Some settling of accounts has also taken place; we no longer collect from several of our early accounts for various reasons ranging from quantity to quality of the oil. The amount of oil collected has increased steadily over the summer. The week of 10/02/06 YBDC collected over 440 us gallons! That’s a lot of grease.

By Ethan Fox YBDC Member

Collection Report from the YBDC President

We have a great deal of opportunity as we have become the group that restaurants call if they want their oil picked up. Unfortunately we are still sitting on oil collected last fall and will probably end up storing LARGE amount of raw oil. Oil collection has been a challenge this year. Thank you to Ethan and Leo for taking care of that not so glamorous aspect of biofuel production. The University of Iowa has switched to a new system that will require us to change our methods and will also require a good deal of investment to remain in compliance with SPCC guidelines. The need for a more practical winter collection system looms very large.

By Steve Fugate YBDC President

Glycerin Disposal Baby!

With all this biodiesel being brewed we naturally have plenty of this lovely black fluid laying around, we love it, you love it, that’s right, and you guessed it’s...Glycerin. Now that we make so much fuel we have even more of this somewhat nasty stuff seemingly all over the place. At first a guy was interested in taking all the glycerin off our hands to use it for something or other, so it seemed that our immediate needs for glycerol disposal were covered. But of course this was not to be, he for some reason didn’t want our waste glycerin... alas. So we waded on knee deep in the black stuff with no end in sight and no plan B for what to do with all the byproduct. Well whoever said “relax, things will work out” was not wrong this time either.



Above left: many, many containers of glycerol
Above right: 300 gallon tote ready to go to the dump.

Turns out that we can take it to the dump where for the small fee of \$25 per ton (equal to one tote or roughly 286 gallons) they broadcast it onto compost piles, the dump can take two tons per week as a result of a University of Iowa pilot project for food waste recycling.

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The U of I can certainly produce a lot of food waste so we are on a push to get ours there as fast as we can. Steve Fugate also mentioned that a company in Mt Pleasant is looking into purchasing our waste glycerin for spreading on gravel roads, this could be nice.

By Ethan Fox YBDC Member

From the YBDC President

When traveling, YBDC President, Steve Fugate meets and greets a lot of people in the bio-fuels and energy community; he gets a chance to visit a lot of workshops demos and booths at energy shows. He ventured into his own business recently as many of you know; Steve launched Flying F Bio-fuels www.ffbiofuels.com last March. Currently he is very busy with affairs at the new company. The flag ship of FFBio-fuels is The Ester Machine a self contained unit designed to produce around 80 gallons a day. Work is underway on The Super Ester Machine which will be a mobile production unit designed to produce 500 gallons per day in a demonstration mode, in production mode the unit can produce up to three times that amount..

STEVE FUGATE Says: Greetings fellow Bodieselers. This presidents report is long overdue so I will make it good. This year has been a very challenging one for YBDC. Biodiesel has become a hot topic with interest from schools, collages, contractors and municipalities all wanting to get in on a good thing. Any one comfortable enough to speak to a group can be provided with an appropriate PowerPoint presentation

and 10 gallons of Biodiesel for their efforts.

Last spring I came to the realization that in spite of our attempts to NOT spill oil we were bound to spill some and we had better get a cement slab in to catch our errors. Putting in a slab proved to be a major project requiring lots of time and \$\$\$. Preparations were a real scramble but we managed to install PEX tubing in the floor to utilize the hydronic panels that Don Laughlin donated and installed. Thank you Ron and Don as well as the guys from Mall Services for you substantial efforts. The floor looks beautiful and has retained many gallons of spills! We have yet to locate a manifold to utilize the in floor heat but do use the hot water to heat the dry tank.

The spring workshop was very well received by about a dozen attendees from all over the Midwest. Two processors were built and many friends were made but, due to lack of member support for our workshops, we will no longer be offering them on any sort of a regular basis. If anyone out there believes education is an important part of what we do and would like to volunteer to organize the workshops, cover events or speak to groups, please let me know.

We managed to purchase the collection trailer that we had been "borrowing". We also installed a second processor and 2 cone bottom settling tanks. We will finish that off with gravity feed glycerin collection tank soon, no more juggling and tugging glycerin! We fell short of our production goals but displaced over -- tons of carbon emissions utilizing locally available waste resources. Thank you all for making the move to a more sustainable future possible and practical.

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Member report:

In the coming year we are presented with a great deal of opportunity in both production and education. The need for increased member input looms large. Anyone willing to put in 3 to 5 hours per week as a working member or volunteer, will be greatly rewarded for their efforts. All coop positions are open for nominations.

President
Production Master
Collection Master
Compliance Officer
Secretary, Accounting
Outreach Director
2nd Shift Lead

We have a huge backlog of facility improvements, maintenance, cleaning and planning that need to be cleared up before we begin a new brewing season. Last year the Iowa Renewable Energy Assn. (IRENEW) donated 1KW of PV panels to YBDC. I feel obligated to put these to good use! We will be working with IRENEW to arrange an installation workshop in order to leverage the contribution. We also have another 5 hydronic panels as well as 3- 100 gallon stone lined storage tanks that would allow us to heat the floor and process tanks. We began excavation for our 3 pond waste water treatment system last year but need some volunteers to select and acquire the appropriate fauna, finish digging and finish the project.

The position of membership director deserves a much better go of it than has

been achieved over the last couple of years. I strongly encourage someone with the time and organizational skills, to apply for the position as the success of our coop depends on it.

YBDC Memberships for 2006

For 2006 the membership guidelines have been restructured and accepted by all present at the last general meeting held in the Oasis on February 16, 2006. These new guidelines are as follows:

Friend of YBDC \$25/yr, event discount, electronic newsletter.

Corporate Friend of YBDC \$200/yr, mention in promotional materials, event discounts.

Economy Membership \$100/yr or until 100 gallons is used, 30 gal/mo.

Standard Membership \$200/yr, up to 60 gallons/mo.

Sustaining Membership \$500 one time, admiration and negotiable discounts.

Lifetime Membership \$1500 one time, up to 70gal/mo.

These new membership guidelines will increase dues and member fuel prices, while also providing increased funds for the coop operations. These funds will pay for concrete and equipment to help get us started this spring

By Ethan Fox YBDC Member

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YBDC wants to hear from you!

We welcome questions and feedback from people in the community; this helps us determine our impact. Please feel free to contact us via our website at: www.ybdc.org and click on the contact link. Or email steve@ybdc.org your input will be carefully considered.

YBDC needs

This is a list of things we need, we will publish this list in each newsletter, this way people who want to help us can see where to jump in. If you have any of the following items and don't need/use them please feel free to donate them to us:

Steel or plastic barrels, Ag totes or large tanks, Pumps of any kind, Fire extinguishers, Lab items, Paper towels, Rags, Sawdust, Labor, Lab skills, Trash disposal, Accounting help, Secretarial skills, Grant writers, Legal assistance, Pickup truck with Tommy Lift, Sturdy trailers, Diesel generators, Construction materials, Diesel tractor, Electrical or manual wenches.

With the help of readers of this newsletter, we hope to improve YBDC. With any luck some anonymous millionaire is reading right now and is thinking to themselves, "wow I should give these nice people some disgusting amount of cash so they can be the best biodiesel coop ever!" Then we can buy a new-to-us collection vehicle.

By Ethan Fox YBDC Member

Grease Contributing Establishments

Featured Establishment

■ Shakespeare's Pub & Grille



They taut the best breaded pork tenderloin Johnson County!



Shakespeare's Pub & Grille is a great place to eat and drink with great people and great atmosphere!

■Hamburg Inn#2 ■The Pit ■The American Legion ■The Edge ■The University of Iowa ■Mercy Hospital ■The Vine Coralville ■Jonesey's ■The Oasis ■Slims ■Verde ■Fitzpatrick's

The Grease Rappor Contributors include:

Ethan Fox YBDC Member
Steve Fugate YBDC President
Eric Foresman YBDC Member