Today on Across the Fence a student led project has and at the University of Vermont to have steers the campus towards being more bicycle friendly and a segment on feeling Vermont houses are with biomass. We will see how farmers are reducing costs and reducing fossil fuel dependents at the same time. Good afternoon and thanks for joining us I'm Judy Simpson. A greenhouse helps a farmer extend the growing season and in recent years with the increased demand for local products the use of green houses in Vermont has also increased. But in order to work a greenhouse needs to be heated and that's where the University of Vermont extension arena house biomass the furnace project comes in. Across the Fence's Keith Silva explains.

Green houses give vegetable farmers a job on the growing season. Protection from chilly springtime temperatures comes at a cost.

Vern Grubinger.: Greenhouses can be really expensive especially for those that start early so few trying to keep these big plastic bags warm in February and march it takes a lot of energy. University of Vermont Extension vegetable in berry specialist Vern Grubinger helped to develop the UVM Extension biomass project. Through a cost share incentive Grubinger is working with greenhouse vegetable growers to decrease dependence on fossil fuels well also literally reducing greenhouse gas emissions.

Vern.: This cost share is part of an educational program that is linked to a R&D. on the farm so by making some payment to the farmer not only to reduce risk but also to ensure that data is collected about how these units work how much fuel they consumed what the payback is that allows us to share information with additional growers so that if the systems work well enough they will be able to be more widely adopted because people know what it's going to take to make it work well.

Andy Jones.: For the first couple months we thought this is a huge lemon.

Andy Jones is the farm manager at the inter veil community farm in Burlington.
Andy.: Our first year we had a lot of challenges getting nothing set up getting a burning right. We had the chimney according to spec in the Manual but it didn't end up working in a greenhouse environment so there was a lot of tinkering with if to make the system run well. This year it's been great we couldn't be more excited to have it. It's a little bit like keeping the wood stove let on a hot day.

Jones is heating of corn supplied by a farmer in Addison county. Other farmers in the project are using wood pallets or a mix of corn and wood as a fuel source. No matter what fires the furnace the money that is saved by burning biomass instead of fossil fuels is substantial.

Andy.: The furnace is probably helping us with reducing or eliminating 80% or so of our propane use. We used to run the greenhouse on a couple propane unit heaters. It's amazing because 80% is significant especially when you look at and consider the cost of propane vs. the cost of these other fuels. It's not quite half the cost but if for shaving 40% off our fuel cost that's pretty attractive.

The biomass unit here who at the inter veil are community farm home cost a little less than $6000 to install. That's three times was similar propane unit would cost. Has a lot of money but consider this fuel expenses for Vermont farms have doubled in the last five years from 15,000,000 in 2002 to over 32,000,000 in 2007 that's according to the latest report from the United States census of agriculture. Additional factors that this data did and take into consideration are the sustainability of fossil fuels and the overall cost to the environment.

Verne.: The thing that I really like about this approach is that it's a win win situation where you're addressing a lot of concerns at once and I got into renewable energy in part from a climate change program I was involved in and realized people may be concerned about that that it's hard to spend money to do something for that reason only. When you can reduce your fuel costs give some measure of security about future fuel costs and have some control over what they might be. Maybe get a marketing advantage because you're consumers are excited about what you're doing to use less fossil fuel. Then it all comes together in a package that makes more sense as far as changing human behavior.

Andy.: I believe it's about 20 bushels.

Jones has worked with his local municipality to cut energy costs on the farm but having a project that's backed by UVM extensions experience working with farmers gives this project a significant edge.

Andy.: The fact that this really was an extension lead program to begin with I think really did help us out because it set up a program that really related to the needs of a greenhouse. It helped us talk to people who are in the industry. It's people who are using the furnace and the same application and we are and there's no substitute for that.

This UVM extension project is lighting the way for reducing fuel costs increasing sustainability on the farm and protecting the environment. In Burlington I'm Keith Silva with Across the Fence.
Judy.: You can get more information on extensions greenhouse biomass furnace project by calling the number on your screen that’s 802257 7967. Is also information about the project on the wet you can search the UVM extension website or go directly to the site that’s listed on your screen.

Our next segment takes us to UVM campus. This spring a group of students launched the first phase of a transportation project that involves pedal power. For more on that we join Across the Fence’s Rebecca Gollin.

For most college students the end of the school year is not the time to launch a new initiative. But one group at the University of Vermont is doing just that.

We want to launch the bike share at the last month of this year as a pilot to feel of the waters.

The students are members of the bike users group which they call bug. This spring day is their official launch.

We were a couple students who want to see more bicycles on campus.

The group has been working tortes this moment for almost two years.

Jesse myself and our friend Todd had an idea that we thought UVM should have a bike share program. A few months into that process of trying to start one out of thin air nobody was listening to us so we realized we would get a lot more leverage on campus if we started a club because then we would be potentially eligible for UVM funding we would have a faculty adviser.

Getting the project off the ground was a long process.

In order to be recognized as a club we had to go through risk management process which a bunch of students who are trying to share bicycles and put people on moving vehicles that was time consuming to say the least and over the course of the months with park and transportation services with campus planning.

One of the group's major advocates has been Jim Barr whose director at the university's transportation and parking services. Barr was a rethinking about the future of biking on campus when Simmons approached him.

I had a subcommittee where I'm dealing with all things bicycle. Creating a bicycle master plan for campus routes in Hubs and cover bike racks and all those kind of things are in the future. But they came to me just as Simmons who's the president of the bug and said hay I have this bike share program that I've been trying to get off the ground for 12 months we say we team up on this?

Barr was happy to oblige. Together with representatives from the university's office of sustainability as well as risk management he formed an advisory group for the bike share program that collaboration resulted in both the bug as well as the group's other project a bike repair shop where they will also help tools and workshops.
We wanted to start a bike shop that would be run by students supported by students just a support network for anybody that had a bike on campus.

We will work on our own bikes in the shop. Keep the fleet sustained. That's a really important part of the program for us to keep it a self-sustaining fleet student our student initiatives. We are actually quite capable people only want to be and bike users group which is swelled to the size of 2 to 300 students their quite a few handy mechanics.

The group hopes that the program was not only get more students on the bikes but also cut down on the number of unused bikes on campus.

Every year res life collects some 30 to 60 bikes that have been left behind. That have been snowed on are no longer working broken down some way and there's always an over concentration of bicycles on campus. There's never enough space to park in bicycles. There are never enough racks..

I'm a mountain biker myself I love to bike and I see this with the dwindling parking spaces on campus as new buildings go up parking spaces go away there's fewer and fewer places to park so the idea would be my interest is make sure that the use of bicycles on campus is done as smooth and as effective as possible.

The bike users group is just one piece of bars master plan? Really my intent not only with the bike share program but by creating a bike master plan for campus is to really identify what should be year and then tried to make it that way so it's better and invites people to do it.

Although most of the founders of bug are graduating there happy to see their project get off the ground before they go.

It's been really awesome to be personally involved with that because as a student you feel like you're involved with something larger than just getting a degree. We have 17 bikes now 17 workman industrial cruisers. Fat tires fat seats and high handlebars. We are hedging their bets that students are going to be around on this campus for a long time and are going to be the foundation of this program for years to come. We're proud to say this is truly a student run Bike fair at the University of Vermont

Riding for success on a bicycle built to share. In Burlington I'm Rebecca Gollin with Across the Fence.

Thanks Rebecca. As for our final segment this at home as we salute the lilac. Here is one of the region's lilac experts are Jeff young of the University of Vermont Hort farm.

The uniqueness of lilacs of course is the fragrance. It's very unique it's very strong in virtually unique in the plant world as something as heavily scented as lilac. The collection here was established in the mid-fifties and in a really nice spot here at the Hort farm on the northern end of the Hort farm. It has evolved considerably since it was first started. There were about 30 or 40 trees planted over the initial. Another about 125 here.

How many varieties of lilacs are there?
About 2000. A lot of the plants here are plans from the fifties and sixties and seventies.

You will recognize the name of them some of them you will. The reason we're here is to
educate people on flowering shrubs and trees and these are multi stand flowering shrubs so
any flowering shrub molt the stem like hydrangea and viburnham the principles are
basically the same in growing them so we do a lot of education. I've done for workshops
here this year already. We also teach professional pruning advanced pruning for people
who do pretty is a living or manage large collections. We teach planting techniques,
transplanting techniques. Maiden’s blush which I consider one of the most beautiful ilex is
in full bloom right now how nature can put all that into one flower to me is spectacular.
You have half a dozen different shades of pink. And, lilacs their only two that occur in
nature the white and the lavender purple we're used to. From that we've made 800
cultivars of those two plants. Not native. It was a favorite ornamental plant of the English
and French. It probably came over here in the early 1700s both Washington and Jefferson
had them in their homes before the revolution so we know they've been here for many
years. We don't start seeing the cultivars of the lilacs until the 20th century. They really
start in the late 19th century but they don't come to us in Vermont or even New England
until the teens and twenties. 1920s later that of course after world war two there was a big
proliferation of lilacs in flowering shrubs of all kinds because of the invention of hormone
powder made it easier to propagate them and the costs came down and that kind of thing.
That Sony said to see this larger influx of them. It's not just lilacs but a lot of flowering
shrubs get too tall they get unmangy on healthy and they don't know what to do with them
for the public what we try to do is to teach very simple techniques of pruning and how to
maintain the plant how to watch its health. A lot of the stuff we teach the stuff that are
grandparents new and their parents before them. Their routing techniques and using
compost rather than fertilizers and things of that sort. Which give us very nice healthy
plants and still protect the environment at the same time.

Do all lilacs smell exactly the same?

No in fact if you spell that on there that’s a common lilac this one here is the Asian lilac
have what they call a spicy snow you’d still recognize it as a lilac but it has a distinctly
different smell to it. Many of them can be fragrant and there are some lilacs that don't
have a lot of fragrance to them. Some are really like Pocahontas has a lot of fragrance to it.
It's funny because if you're out here it's the news today and if you stand downwind from
these is pretty good but on days that there's no wind and the scent simmers up so that you
walk into the collection and it’s this amazing fragrance coming at you. It’s like standing
over boiling water you feel it come up and around you. It's really not rocket science garden
should be fun it should be enjoyable and that so that each here the fun of gardening.

Judy.: And our thanks to lilac curator Jeff young as well as the friends of the UVM Hort
farm. That's our program for today thanks for joining us I'm Judy Simpson all see you
again next time on Across the Fence.

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