NEW HOMES

■ Tips about home buyers / I6
■ Leanne Brownoff / I3

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SUPPLIED

A straw-bale multi-family house provides excellent indoor air quality and a non-toxic environment.

Kirk Taylor drops a bale onto a wood base which covers concrete foundation; vertical pegs with sharpened points skewer the bale into place.

Straw-bale homebuilder shares expertise

Eco-friendly advice part of the course at Trimline Training Centre

JANE MARSHALL
Special to The Journal
EDMONTON

If you could build a house with R-50 insulation values, fire-resistant enough to last two hours in 1800-plus-degree conditions and had 20-per-cent lower heating costs — would you do it?

These are some of the reasons that drive potential homeowners to sustainable housing technologies such as straw-bale construction. People are no longer satisfied with just stamping out a large environmental footprint with the construction of their homes, they also want to apply that to how those homes use energy.

Choosing to build a more environmentally friendly home is a decision an increasing number of Canadians are making simply because it has lasting benefits for Earth. It also leaves their wallets considerably fatter when it comes to paying energy bills.

Information about sustainable housing is becoming more widely read and easier to access, inspiring people to install solar panels, lay down in-floor heating coils, and explore ways to be gentler to the Earth. Yet many well-intentioned people still need the hands-on experience and appropriate products to realize their environmental goals.

Trimline Design Centre of Edmonton has filled a void in the progression towards sustainable housing. Owner Harold Verburg established the Trimline Design Centre after renovations to his home four years ago. At that time, he had difficulties finding environmentally friendly products suitable for the Canadian climate.

> "Testing of straw-bale construction has shown considerable benefits in the wind strength, fire safety and heating and cooling costs."
> Lorie Saito, course instructor

His response was to offer products and information for others like him, hoping, as he explains, to "empower people to make informed decisions on renewability and sustainability."

Verburg opened the Trimline Training Centre last June in response to increasing demand for environmentally sensitive technologies and the need for customers to know how to install them properly. The training centre also provided a fail-safe, weather-protected place to demonstrate techniques which are often done outdoors. The training centre offers hands-on courses, such as: Bio-Diesel — How to Make it, Carbon Busters — Become Carbon Neutral, and Straw Bale Construction — Sustainable Housing.

As the Trimline Design Centre grew, "more of our clients and customers were well-versed and knew about the systems, but they didn't have the hands-on experience," he says.

"People are driven by books and what they read. They see that little picture of a product, but don't know that it actually weighs a lot."

This is where Verburg saw the need for an education centre, a place to transform ideas into action and give people the skills and practical information they needed to succeed with their projects.

Straw-bale construction is a good example of a technology that Trimline helps customers understand. Straw-bale construction uses a material that is annually renewable, simple, sustainable, and allows for a marked reduction in the homeowner's heating and cooling expenses.

No wonder more people are taking note.

Lorie Saito, course instructor at the Trimline Training Centre, talks about a study which compares straw-bale homes to siding homes. She quoted from a video, *Straw Bale Code Testing*, produced in 1990s by the Straw Bale Building Association in the U.S.: "Testing of straw-bale construction has shown considerable benefits in the wind strength, fire safety and heating and cooling costs."

Depending on correct design and construction, these buildings can outperform a conventional building in winds reaching up to seven times hurricane strength in lab testing.

See STRAW / I2

Instructors Lorie and Robert Saito crouch in front of a demonstration-built straw wall, with a class of students behind.

CONTACT INFORMATION

- Trimline Design Centre, 6772 99th St.; 466-9034
  www.trimlinedesigncentre.com
- Trimline Training Centre, 6776 99th St.; 466-9034
  www.trimlinetrainingcentre.com
- North American Board of Certified Energy Practitioners
  www.nabcep.org
- To learn more about straw-bale construction:
  www.strawhomes.com

Above, instructor Robert Saito shows the next step of putting sharpened pegs into the bale to hold the next stack above.

Left, Steve Marsen now uses a tool like a strap wrench to clasp wire from the bottom of the frame to the top of straw bales to tighten them into a solid wall.

PHOTOS: KEN ORR, THE JOURNAL

Straw homes perform well in fire-safety tests

STRAW
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Fire testing of stucco-encased walls exceeded expectations, lasting two hours in more than 1,800-degree temperatures in their test furnaces, she says.

Conventional homes with vinyl siding were, in the words of the test supervisor, Jack Crowder, "dripping napalm in half an hour" under the same conditions.

The builders of straw-bale homes usually live out of town and are looking for a gentler way to construct and relate to their homes. Straw-bale homes are appropriate within Edmonton's city limits, though it is important to remember that the structures often demand large overhangs and thick walls. Aside from these features, Saito explains that the appearance of a straw-bale house "can be as different or as similar as the owner chooses to make it."

The courses attract customers and homeowners, as well as trades, architects and even real estate agents who want to recognize specialized equipment used in homes.

Further promoting sustainability and assisting the growth of this concept, Verburg has teamed up with the North American Board of Certified Energy Practitioners, to provide an accreditation system for trades.

The volunteer board promises to "support and work with the renewable energy and energy efficiency industries, professionals and stakeholders to develop and implement quality credentialing and certification programs for practitioners."

The training centre building uses technologies such as domestic solar hot water, grey-water recycling, a wind turbine and two solar PV (photovoltaic) systems. It is net-zero for water and electricity consumption, meaning that on an annual basis it creates as much energy as it consumes, practising what it preaches.

Trimline creates environmental solutions in seemingly unlikely places. Last year, Trimline provided the Edmonton Folk Music Festival with solar PV (electricity) for the tills and swipe machines in the vendor tent, as well as solar hot water for the concession's dishwashing needs.

Verburg has married people's desire to live more responsibly with the tools, skills and information necessary to achieve those desires. Whether it is hooking up a solar hot water system or using cooking oil to make bio-diesel, the Trimline Training Centre has made it possible to learn about and purchase renewable and sustainable technologies.

PHOTOS BY KEN ORR, THE JOURNAL

Above: Instructor Robert Saito stands behind an installed window frame.

Left: Student Kelly Henning helps with the second layer of bales.

Far left: Instructor Saito aligns bales with student Steve Marsden.