Rural Training Center-Thailand

2008 Fall Farm Update

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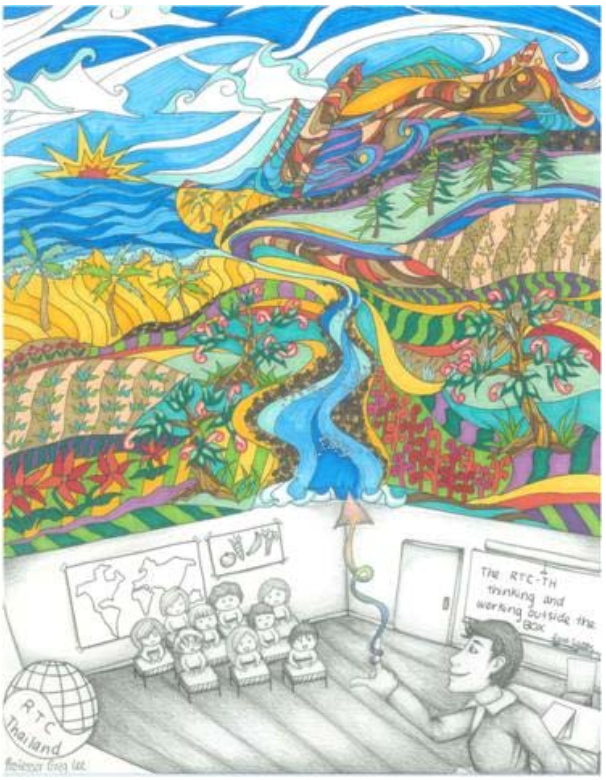
Community-based environmental education for the self-sufficiency and sustainability of small rural family farms

RTC-TH Poster



Sara Walter created a poster to show the innovative RTC-TH community-based education approach of "thinking and working outside the box." Sara is a young artist who volunteered her time to create this beautiful poster. She loves nature. You can see some of her other creations at http://chiggywok.deviantart.com/gallery/

Greg Lee, RTC-TH Co-founder developed this teaching approach as a means of combining classroom knowledge with practical application. "The education system tends to be compartmentalized," says Lee. "This misleads many students into segmenting their learning. It fosters 'thinking inside the box' of the classroom. Getting students actively using their knowledge and skills in the real world is challenging and stimulating. Volunteer work and community service are a great way to connect learning with earning and life in your local community. This helps bring lessons and learning alive for many students."

Lee studied geography for 9 years in 4 different US universities. After graduation, he worked for 12 years in private companies using geography ranging from natural resources to environmental consulting. "I decided to get back into teaching after I encountered many recently hired college graduates who couldn't really do the work. They couldn't make the transition from class and books to practical job skills. I thought I could bring my insights and experiences about applied geography to the students to help them put the earn into learn."

Interestingly enough, Sara's mother, Veronica, is a former student of Lee's and is now completing her MA in Geography at CSU-Northridge, specializing in GIS (Geographic Information Systems) and is a firm follower and believer of Lee's teaching approach. "Prof. Lee's presentation of the

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Geographic Systems Model made so many things fall into place for me. I make use of it in so many ways. I can't understand why more people don't use it each day," say Veronica.

Having Sara volunteer to make the RTC-TH poster was just part of the volunteerism in the family. Her husband Allan and both daughters (Samantha and Sara) routinely volunteer in the Angeles National Forest performing community service.

In the past, Veronica and her family also donated books to REEEPP. During the recent move of the top RTC-TH management team to Thailand, Veronica donated more books and games. These will given to the Ban Na Fa Elementary School faculty in the near future.

As a retirement gift, Veronica presented Mr. Lee with a token of appreciation. It was a statement in a simple frame. "Many students have gone so much further than they thought they could because a teacher said they would."

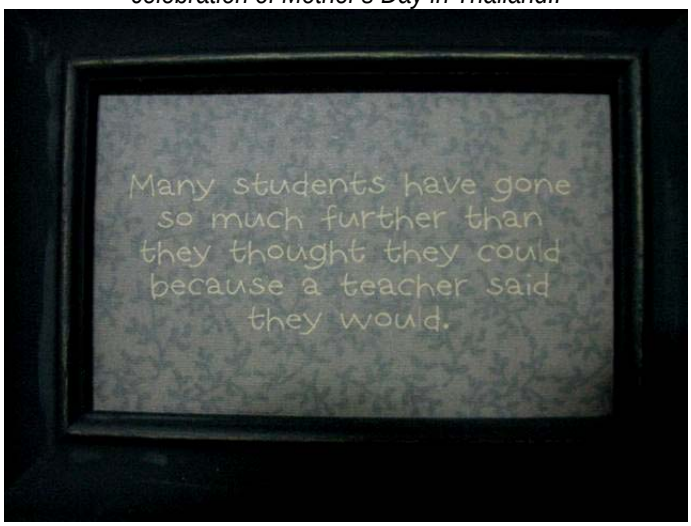
"I feel that Mr. Lee's teaching has made a big difference in my life. His encouragement and support are a big part of why I am where I am today," says Veronica.

In the near future, Veronica will be spending volunteer time assisting the RTC-TH with GIS applications for the demonstration farm and REEEPP.

"It's students such as Veronica and many other RTC-TH volunteers that make teaching worthwhile," says Lee. "Life is about doing good things. It's not about money or fame. It's hard enough just to be a good person. We try to make it easier for people to do good things."

Veronica and her family donated books for REEEPP.

Na Fa Elementary School students include English in the celebration of Mother's Day in Thailand..



A gift of appreciation from Veronica

A stingless bee (possibly Trigona. Collima) about 4mm long, is tiny in contrast to an Atlas moth.

An Atlas moth (Attacus atlas), a giant in the insect world (~25 cm wide), lives on our farm

Insect Friends

From large to small, insects are part of the local biodiversity we hope to help protect and nurture while developing self-sufficiency and sustainability for small rural family farms.

The wide variety of insects found on the farm attests to the fact we don't use synthetic agri-chemicals on the farm.

Integrated Pest Management (IPM) is practiced, integrating host plants for beneficial insects with crop rotation and avoidance of synthetic chemicals on the farm. Striving for a health ecological balance is the key to sustainability.

Butterflies are sensitive environmental indicators. Some reports indicate the synthetic agricultural pesticides often kill the target pest and at least 10 other beneficial insects. The abundance of butterflies and other insects is a general indicator our farm is an agricultural chemical free zone.

A praying mantis (left) and a native stingless bee (possibly A. Cerana. Protecting native species is important for us.

Dragonflies are natural mosquito predators. On our farm, dragonflies are a daxxling variety of colors.

Partial rain water harvesting system installed on the cowshed.

Pouring the foundation slab for the cow shed water tank as clearing the foundation for the farmhouse tanks begins.

Rainwater Harvesting

We continued our efforts with building new water storage tanks for the new gutters on the cow shed and the east roof of the farm house.

The smaller tank for the cow shed will be made using pre-cast concrete rings similar to storm drain pipe. The rings will be placed on the concrete base (containing the piping). The rings are then cemented together. Past experience with the method has lasted 20 years. It will have a capacity of about 1,005 liters. Overflow will go to the cornfield until additional storage capacity is built following the planned remodeling of the cow shed and water overflow system.

The larger tanks for the farm house will be cast in place using steel forms. A dual tank system is planned with a storage capacity of about 10,322 liters. This doubles the water storage capacity of the farm house. Currently, the two similar large water tanks for the farm house are full.

Pouring the foundation for a double "cast in place" water storage tank system. We come up with new ideas to improve the way we build the tanks so don't have a standard design yet..

The cast in place water tanks require renting metal forms. These tanks are larger diameter than pre-case concrete rings. We are trying different types of tanks in seeking a standard tank for RTC-TH use.

Shift to Fish

We decided to make a shift from livestock (pigs and cows) to fish. The high cost of feed and the volatile market prices for pigs and cows made cash flow difficult. The fish ponds are an integral part of the water resource management plan for the farm. So it seems much more logical to put more emphasis on raising fish protein.

We currently have tilapia and catfish in our ponds. They are the main animal protein we raise to feed our family. And, we sell the surplus in the village to generate some supplementary cash. We stock a small tank with fresh fish and sell the fish at the driveway entrance at the house in the village.

To avoid some of the cash flow problems of the larger livestock, various alternative fish food are being used. Most farmers will by commercially made fish food. We are reducing our use of this type of feed by using food sources found on the farm: 1) raising crickets, 2) gathering termite mounds found on the farm; 3) using worms used in our composting efforts; 4) using rice hulls saved after milling our rice; 5) using compost and other plants on the farm; 6) using fly larvae from garbage.

Some of the sources of food fit well with our non-toxic integrated pest management (IPM) plan. And the on-farm nutrient cycling / recycling is a sustainable practice conserving our natural resources and our cash. The revenue we generate by selling fish is not going to make us rich. But it helps to supplement our budget.

We keep a small tank of fresh fish stoked at home so we can fill orders from villagers quickly. They can also buy fish as they pass our driveway on their way to and from the fields.

Fresh catfish from the farm 1km from the village. Catfish are a Thai favorite in our area. The fish are sold by weight.

Termites knocked loose from a mound are free fresh live food for our fish.

Crickets caught in the farm fields are raised in barrels and fed to the fish as fresh live food.

The RTC-TH has a Garmin GPS II Plus available.

GPS coordinates were collected for major farm features.

Farm GPS Survey

A preliminary GPS survey was undertaken as a prelude to future GIS applications for the farm. In previous years, the estimated precision for GPS coordinates as about 13-17 meters. This amount of error was unacceptable. However, after learning to examine the satellite almanacs, we were able to obtain precisions of 4 meters---still a sizeable error, but considerably better than 13-17 meters. So we collected some preliminary data points.

Veronica, a former student of Mr. Lee, and a major in Geographic Information Systems (GIS) applications (incidentally, GIS also stands for Greatly Interested Student) paved the way for this effort. Through her contacts, she provided us with information and resources to obtain and use the GPS satellite almanac information.

After collecting the coordinates, the data were entered to Excel spreadsheets and e-mailed to Veronica. In her spare time, she will plot the data and provide the preliminary GIS graphics of the farm.

Though GIS seems at odds with the "no tech / low tech" approach in the RTC-TH, much of the field mapping is still done with compass, tape, and string level. "Having advanced technology is helpful, but there is no substitute for practical knowledge and hands on skill on the ground," says Lee, RTC-TH Co-founder and chief architect of the training curriculum.

"We want folks to be able to function when the batteries die or the equipment fails. In the end, technology doesn't make up for lack of comprehension and ability." It is most important for work to be done, with or without high tech equipment.

Thank goodness for the Internet: The coordinates were put into spreadsheets and e-mailed to Veronica in Los Angeles, CA.

Compass, measuring tape, string and a string level are the RTC-TH basic low way to assure the work gets done when the batteries die or the high tech equipment fails.