



RTC-TH Jun 2011 Special Update

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

ชุมชนตามสิ่งแวดล้อมศึกษาเพื่อการพึ่งตัวเองและยั่งยืนชนบทขนาดเล็กครอบครัวฟาร์ม

You may post questions / comments to the Discussion area of our website

Fire on the Farm



Half way through dinner on 7 Jun 2011, we got a call there was a fire on the farm. It took us about half an hour to drive from town to the farm. It was dark. By the time we arrived, the entire 2nd floor was gone. The subdistrict fire truck was on the scene and began to fight the fire, but had to delay until the electric service to be cut. Fortunately everyone was home in the village so no one was at the farm.

<i>In This Issue</i>			
Fire on the Farm	1-2	Cleanup Day 1	6-8
Day After the Fire	2-5	Cleanup Day 2	9-10
Farmhouse Layout Diagrams	4	Cleanup Day 3	11-12



The Jompra Subdistrict fire team showed up.



The Thawangpha District fire crew came to help.



The Police investigation begins as the fire burns.



After the fire is out, Police tape off the area.



The house is taped off for further investigation.



The brick walls of the bathroom and the outdoor kitchen



Hand tools salvaged from the fire.



Power tools that didn't make it.



This is an earlier photo about the time the parking area was graded in front of the house and before the porch awning was installed. (Note the solar PV panel at the left marked by a yellow arrow).

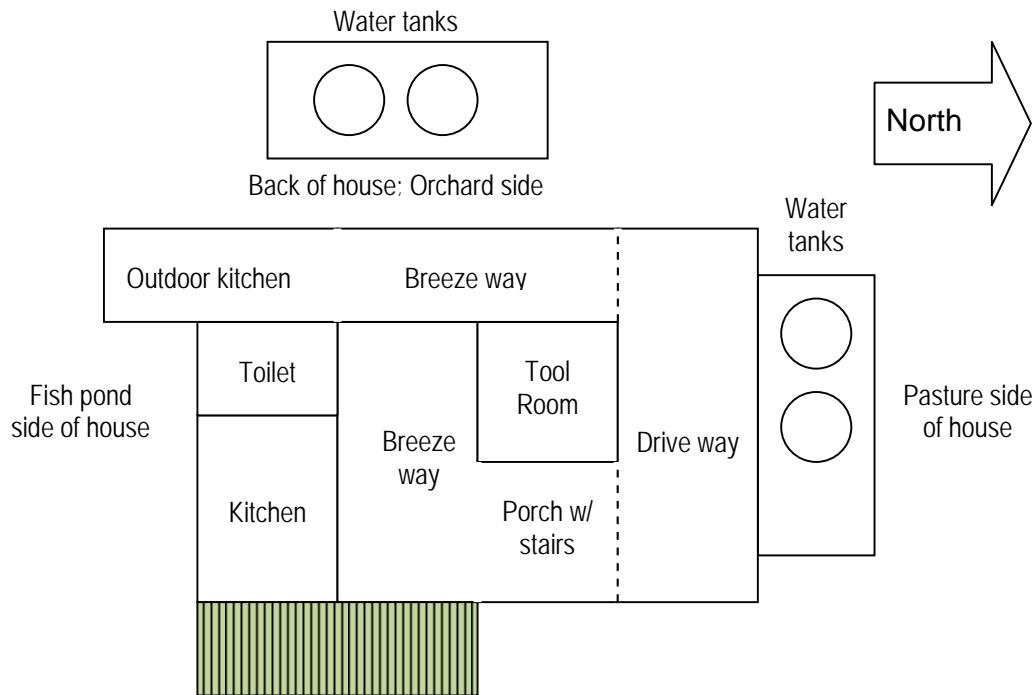


Remnants of the green porch awning remain. (Note the solar PV panel at left marked by a yellow arrow)



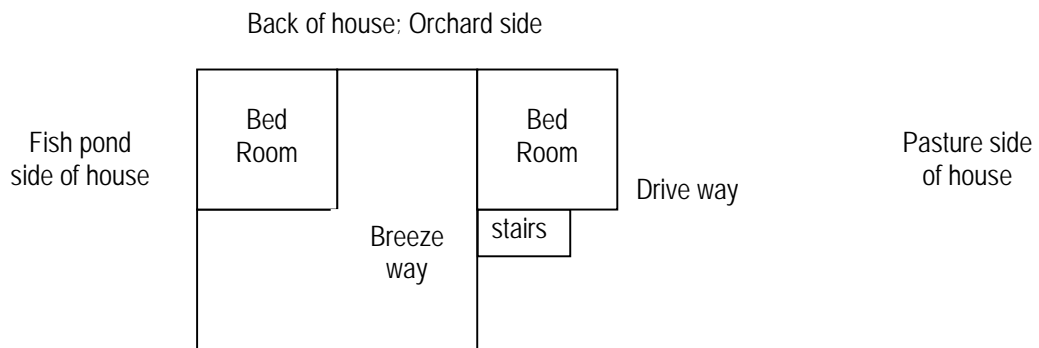
A before and after photo set from across the West Fish Pond. Notice the radiant heat damage to the orchard.

The radiant heat damage to nearby plants was more extensive in the orchard at the rear of the farmhouse. This suggests the fire was more intense there; the wind was blowing in that direction, or both.



Front of house; parking area side

The ground floor of the farmhouse.



Front of house; parking area side

The second floor fits over the Toilet, Breeze way, Tool Room, and Kitchen.

The floor layout diagrams help orient you to the farmhouse. It used 3m x 3m post and lintel construction on a concrete slab floor with concrete pillars. The second floor was wood with a corrugated sheet metal roof. The green sheet metal awning was added after the initial construction.

This farmhouse replaced the original farmhouse built on about the same site. This farmhouse was intended for a worker family in about 2004. They left our employ about 2007. A second family started about 2009 but left after a month or so. We have been hiring day labor on an as needed basis since then. The farmhouse served as a rest shelter and storage building. It has the only toilet on the farm.



Outdoor kitchen area



One shelf with a pot remains in the outdoor kitchen



The front of the house with the green porch awning.



Pi Oi looks over the scene of the fire.



Photo of the front porch before the fire showing the wood stairs.



After the fire, porch covered with fallen roofing; stairs were burned away.

The front porch is covered with scorched sheet metal roofing panels. The stairs are gone and the entire second floor. Only a few charred vertical posts remain.

The concrete pillars and brick walls on the ground level are still standing, but their structural integrity is questionable after being subjected to

the heat of the fire. The basic post and lintel design means the walls are non-load bearing. The posts and lintels carry the structural load.

Plans to rebuild won't be implemented until the dry season in Nov. The sala on the East fish pond and the old Pig Shed are viable shade structures. The only restroom was at the farm house. If the toilet and septic tank plumbing were not damaged or destroyed by the fire, a temporary shelter roof over the old toilet could put it back into operation once the water supply line from the nearby water tanks is replaced.



View from the back (west) side of the house (water tanks to left, outdoor kitchen to right).



The cleanup process begins with removing any loose overhead hazards.



End of the first day of clean up has most of the fallen sheet metal roofing removed from the house.

There appears to be heat damage to the upper portions of some of the concrete pillars. The second floor wood pillars were bolted to the tops of the concrete pillars. The weight of the collapsing structure causes some fragmentation of the concrete pillars at the locations of the steel bolts. Part of the back wall of the tool room collapsed, and large cracks are in 2 of the bathroom walls. We couldn't assess the kitchen as we haven't been able to remove the fallen debris fill half of the room.

The bulk of the debris from the second floor fell within the foot print of the house, and into the outdoor kitchen area. Very little debris fell toward the front of the house. Only sections of gutter were found on the green porch awning, a few small remnants of roofing cross slats, and a half dozen burnt slats from the kitchen were found at the front beyond the walls of the house.

Hardware from window and door fittings from the second floor was found on the ground level in the outdoor kitchen area and the side of the house facing the fish pond near the outdoor kitchen.



Searching the tool room for salvageable items.



The fire's heat fragmented the ceramic squat toilet bowl



Morning of the first day of clean up.



By lunch, most of the fallen roofing was cleared.

Ironically, we had discussed an option to remodel the farmhouse rather than building a new structure as an interim project to get better utilization out of our existing structures. But the layout of the farmhouse floor plan did not make it easy for the additions we had contemplated. So we began to look at plans to add to the existing building foot print. But space and topographic constraints of the site presented different challenges. Exploring these options kept us from starting anything before the fire.



The debris filled kitchen.



Debris cleared from the front porch. Only the charred stair stringers remained without any steps.



Major debris cleared from central breeze way; charred wood stacked on right side.



Most large pieces of fallen debris cleared from the tool room. Many hand tools were recovered but need to have new wooden handles made. None of the few powered tools survived.



Materials cleared from the house are separated and stacked for further sorting. Roofing sheet metal is stacked near the water tanks and front of the house. Charred wood is stacked on one side of the driveway and on one side of the breeze way. Any metal will be removed for possible re-use or sold for scrap. Door hinges seem particularly sturdy and seem easily cleaned for re-use.

We were lucky no one was injured in the fire. The cleanup process is also concerned with safety. In order to clear the debris from the kitchen, we needed more clear working space. We began removing slip and trip hazards from the porch and breezeway. Charred wood was put off to the side for use in cooking fires. Then we started removing nails and broken glass from the clutter on the floor. Many Thais only wear flip flops so we were concerned about foot injuries and possible tetanus. We made some “magic wands” by attaching magnets in the end of split bamboo. These were used to probe through the charcoal on the floor. Recovered nails are sorted for re-use or added to the scrap metal pile for sale to recyclers.



Major trip hazards were cleared to one side.



One of our magic magnetic wands.



The wands sweep through the charcoal bits.



The any nails and screws are readily recovered.

In the afternoon, a spirit ceremony took place to ward off bad luck and restore balance and harmony. Ironically, fire is part of the ceremony. In many Asian cultures,



water, fire, salt and mirrors are among the special items for warding off evil. After the ceremony, the 4 offerings were placed on 4 points encompassing the house at the extreme edges of the farm. Then holy water was sprinkled among the ruins of the farmhouse.



In trying to restore order to the chaos, materials are cleared and sorted. Scrap metal is separated into piles: roofing sheets, tools, nails/screws/hinges. We will assess what can be salvaged / repaired later. Charred wood is put aside for removal of metal fittings. Copper wire is saved for recycling. Broken tiles and masonry separated to fill in pot holes and soft spots in the driveway. Charcoal is kept for crushing and mixing with compost as biochar. Glass and broken pottery separated for recycling.

At the end of Day 2 of the clean up, the front half of the breeze way floor was cleared to facilitated the clearing of the kitchen. We need to have clear access free of tripping hazards and nail punctures. The blue tarp for shade was too sun worn from previous use. When cooling breezed picked up, one side of the tarp ripped apart.

Residue water from fire fighting, early morning dew and a few light drizzles all help keep the dust down during clean up.



Day 3 of the clean up set goals to clear the space under the stair well and remove the major debris from the kitchen. Charred joists from the upper floor and some salvaged roofing sheet metal were stored upstairs all fell into the kitchen area. The front part of the



The kitchen at the start of Day 3 of the clean up.



The kitchen at the end of Day 3 of the clean up.



The area under the stairs had a small wood storage cabinet. Nothing remained after the fire.

Melted plastic and “crackled” glass were notable differences in the charcoal found in the kitchen and the under stairs areas. The plastic had to be scrapped off the floor and came loose in dinner plate sized patches. Glass bottles held their shape by the glass

but was “artistically” crackled. They were fragile and easily crumbled when handled.



The back half of the Breeze way was combed for nails and the charcoal ready for removal.



Charcoal pile waiting for further screening.



Fish die off due to lack of dissolved oxygen

After removing metal objects, the charcoal on the floor is scooped up and put in a pile outside the house. It will be screen to remove masonry and tile rubble. Larger pieces charcoal will be crushed. The charcoal will be used as biochar and mixed with manure and compost as a soil amendment.

The week loss of electric power meant we could not aerate the fish ponds. The East Pond was particularly affected, and fish began to die from lack of oxygen. The recent cloudy weather and algae problems. The Agriculture Department and the Fisheries Department acted quickly and sent a representative to assess the situation and offer advice and assistance. Some compensation is available, and we will use the dead fish to make EM (effective micro-organisms) to mix with our soil and compost. The Agriculture Department is providing the EM starter packets. So as unlikely as it seems, the fire affected the “water” adding yet another clean up activity to the “to do” list for fire clean up.

The cleanup process will take a while Longer. We seem to have a good handle on making use of the residuals from the fire. It is a setback in terms of time, energy, and finances. But we can't change the past. We are trying to make the best use of what is left after the fire and get back on track to do what we can on the farm. 🌐 [Note: It took 7 days to restore electricity to the farm.]