

Final Report/*

Project Title: **Reclaiming Pastureland for Diversified Fruit/ Maple Production**

Grant number: FNE03-459

Project Leader: Stephen Davis

Farm Name: Cold Pond Community Farm

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The goal of this project was to take neglected and overgrown farmland and reclaim it using low impact methods. These methods avoid the destruction of soil structure brought on by the use of heavy machinery as well as reducing the use of fossil fuels and the damage to the environment that they bring. The methods also fit a more sustainable model of land use where human labor and animal power are combined to generate income while improving soil condition and increasing the productive capacity of the land.

Farm Profile. Our farm is located in Acworth, in the southwestern part of New Hampshire. The land is wooded with farm fields scattered about and is drained by the Cold River, a tributary to the Connecticut River. There are various agricultural and home based businesses here, and a strong community spirit. We formed the nonprofit Cold Pond Community Land Trust (CPCLT) in April 2000. The Land Trust seeks to build a community of families interested in high quality food, working at home, and raising and teaching children in a healthy environment. CPCLT owns 275 acres of land. This land serves the needs of seven households, numerous farm animals, and the residents in surrounding communities and across the region who wish to learn about sustainable agriculture. It is a model for alternative living. Roughly 25 acres are open land used for row crops, pasture, fruit production and maple sugaring. Around 40 more acres have been farmed in the past and has potential for future production.

Over the last couple of years since the application was submitted, we have taken large strides in making the Cold Pond Community Land Trust a financially viable and sustainable organization. After buying the 220 acre farm in 2003 we now have 7 residential sites leased and are working to clear the brush and trees from approximately 40 acres of ag land. About 15 acres of this total is rough pasture that is fenced in and rotationally grazed by our cattle, horses, sheep, pigs and chickens. About 2 acres are in row crops, growing produce for sale. More will be added to this figure yearly as the community comes into full production.

4.Participants. The first year we were mostly clearing brush and trees and rotating the hogs over the site. The project manager and two helpers plus 2 farm interns, worked roughly 15 days to cut unwanted trees, pile and burn brush and maintain hog fencing. The Cold Pond Community Land Trust land use committee has been involved in the discussion of how the land will be used. Also, the northeast permaculture gathering was held on the land trust and input was given as to how the specific sites in question might be developed and integrated.

5.Project Activities. Please see section "CHRONOLOGY" We began the clearing and thinning of brush and trees in the winter of 2004 on roughly 6 acres. Cord wood was cut and either sold or used for home use and brush piles were made, some of which were burned. 5 hogs were raised on a 2.5 acre piece and their house and fence rotated over the whole site. Large animals were also grazed over the stump sprouts

twice during the season keeping sprout growth to a minimum. Pasture mix was sown in fall over this rooted up area. 200 Fruit tree seedling rootstocks were planted into beds in spring 2003 and were then grafted in the nursery beds before transplanting.

In 2005, we continued to clear the site of brush and stones. We had a spring brush burning party/potluck, which was attended by approx twenty people from the land trust and surrounding community. Just as the snow withdrew in April, we burned eight brush piles and had a potluck supper which included roasted local vegetables and meats while friends played music around the fires.

The fields were rotationally grazed by cattle and horses three times over the summer keeping sprout and weed growth to a minimum which fostered the growth of grasses and clovers. A small part of the land was planted by hand, to corn, beans, and squash. The area planted was approximately 50 by 75 ft and had been the area most aggressively turned over by the pigs in 2004. Planting was done in hills, with spoiled hay mulch laid over the area between the hills. The crop grew well and matured in the fall, providing squashes and pole beans to the CSA, and allowed us to produce a seed crop of Longfellow Flint corn, an heirloom open pollinated corn variety. In the fall compost was spread on an enlarged area for vegetables and more mulch hay was spread over this same area to control weeds in anticipation for planting in 2006.

In the fall we cut and moved the remaining 12 cords of firewood, which allowed the cleared area to be thoroughly brush hogged. We spread pasture mix over the entire area again, in an attempt to fill in the toughest brushy areas and eliminate the chance for more weeds to grow. The grasses and clovers are the dominant cover. During the winter, one area that had mature pine was selectively logged to produce high quality logs for a home being built on the land trust. The logs were sawn by an on site band mill. Slab wood being used to fuel the charcoal kiln.

Finally in the spring of 2006, we planted all the small fruits and fruit trees as well as tomatoes and squashes in the garden.

6. Results. We have reclaimed a few acres of overgrown land and turned them toward productive pasture and cropland, thinned a couple acres of maple trees, and reduced grazing pressure on our existing pasture and hay land. After twenty years of having used various clearing techniques, we are convinced that a method similar to the one described in this report is the most economical and least damaging to the soils in particular and the environment in general.

7. Conditions. The only adverse conditions encountered were the extremely heavy rainfall amounts that occurred over the last three seasons. Though sometimes challenging management of the large animals, no significant changes in plans or outcome were caused by unusual conditions.

8. Economics. We have shown that clearing land this way can be an economically viable method as income is produced soon (cordwood, pork products, rough pasture) after work begins and overhead costs are very low compared to having heavy machinery do the clearing. The cost of heavy machinery is eliminated as well as any soil fertilizers or amendments. The totals from the balance sheet show a minimal \$400 deficit. However this is a year by year accounting of the grant period only, and not the future where the investment in clearing and planting actually begins to pay off. The small fruits will begin to produce next year as the pasture productivity is increasing. Experience shows also that the land is left in much better condition as the soil layers are not disturbed.

9. Assessment. Over the years we have reclaimed nearly twenty acres of overgrown pasture and hay field. Though this has taken alot of labor, the yields in home heating fuel, pastured animal and other products have been significant. It has been a slow process, but one which is low input and sustainable and protects the land from the damage of heavy machinery.

10. Outreach. Every person who has visited our farm, roughly 30 visitors /month during snow free period has been given a tour of the field clearing progression since 1983. The formal advertised pasture walks will take place in July 2006

Timeline

| | |
|-------------|--|
| Fall 2003 | Received Grant Approval |
| Winter 2004 | Began cutting brush and cordwood |
| Spring 2004 | Five pigs rotationally grazed over cleared site. Pasture mix sown in areas after pigs. Lined out 130 rootstocks for future grafting. |
| Fall 2004 | Area fenced for large animals. Two horses and 3 steers allowed to graze whole area. Removing majority of weeds and stump sprouts. Second light broadcast seeding. Movable chicken houses rotated over field before freeze up. Cut and delivered 16 cords Hardwood firewood |
| Winter 2005 | Cut, skidded, and sawed pine timber for owner built home on land trust. |
| Spring 2005 | Burn the Brush Piles party. Grafted scions onto rootstocks. Mulched garden bed, planted Corn and beans and squash. |
| Summer 2005 | Grazed pasture area 3 times with cows/horses |
| Fall 2005 | Harvested corn and squashes. Allowed horses to graze over garden area. Removed remaining 12 cords firewood. Final broadcast seeding to help establish grass and clover in the roughest areas. |
| Spring 2005 | Transplanted blueberries and fruit trees (apple, pears, cherries) into orchard area. Expanded and mulched garden area. Transplanted strawberries, raspberries, tomatoes and squashes into garden. Pastured horses on permanent pasture. Mowed orchard grasses and weeds. |
| Summer 2005 | Pasture walk. Harvest veggies. Continue rotational grazing and field maintenance. |

Cold Pond Community Farm is a diversified farm using traditional and modern farming techniques to establish an ecologically sustainable farm system producing high quality food. With people working together, farming and farm life is fun and exciting and farms can be maintained for future generations.

Please join us for a day of good food, fun and lots of information.

Agenda:

10:00 a.m. - Welcome and Introductions

10:15 a.m. - Pasture walk highlighting a SARE Farmer Grower Grant Project - Using livestock to clear woodlands, planting a fruit understory and incorporating grazing areas.

11:00 a.m. - Carl Majewski - Cheshire County UNH Cooperative Extension Agricultural Resources Educator - Determining the quality of your forages: testing methods and understanding the results.

11:30 a.m. - Sam Comstock - UVM Cooperative Extension Livestock Specialist - Meeting the nutritional needs of non-lactating livestock on pastures.

12:00 p.m. - **LUNCH:** Beef tasting of pasture raised Angus, Hereford, Devon and Highlander beef from **Sullivan and Cheshire County Farms**, accompanied by blue Hubbard squash, season salad, herbed potatoes and pumpkin pie for desert. Cider will be served. (Lunch provided by a grant from NRCS and Cooperative Extension)

1:00 p.m. - Grazier Panel - A brief overview of panel members grazing methods, followed by a question and answer period.

2:00 p.m. - Adjourn

Please RSVP to Susan Mills @ 603-863-9200 by 10/18/06



UNIVERSITY of NEW HAMPSHIRE
COOPERATIVE EXTENSION

DIRECTIONS TO COLD POND COMMUNITY FARM

From the South: Take 91 North to exit 5. Take Rte. 5 South and across the Conn. River to a left on Rte. 12N, to Rte. 123, take a right onto 123. Follow 123, after Alstead take a fork to the left on Rte. 123A at Gulf Station. Follow Rte. 123A 5 or 6 mi. until S. Acworth. In South Acworth take a sharp left uphill on Hill Rd, 3 or 4 mi. to Acworth Center. Before the church there is a 5 way intersection, don't take the sharp right which is a dirt road but the fork to the right which is the Cold Pond Rd the sign also says to Unity. 1 mile from this turn is our farm on the right across from a small pond, sign says Cold Pond Community Farm.

From the East: Take I 93 North to I 89N to exit 9. Right off exit onto 103. Stay on 103 past the traffic circle at Mt Sunapee ski area. About 1 mi. past traffic circle, take left off 103 Brook Road (restaurant on corner). At end of Brook Rd take a right onto Rte. 10 for a short time then the first left across a bridge onto Lear Hill Rd. at the first T take a left on Unity Springs Rd. Take a right at the intersection onto Unity /Lempster Rd. About 1.5 mi. take first left on south shore Crescent Lake Rd. to the first 4 corners, take the left, uphill on Cold Pond Rd, which is a dirt rd. Head towards Acworth about 4 mi. where the road turns back to pavement and about ¾ mi more there is a small pond on the right and Cold Pond Community Farm Sign at our drive on the left.

From the North: Take exit 7 off I 91. Follow signs to Charlestown and cross bridge over Conn. River. Straight after until you come to Rte. 12. Take right onto Rte. 12 South and then take first left (by transfer station). When you come to first crossroad about .5 mi. go straight on the Acworth Rd. about 8 mi. until you come into Acworth Center, the large Congregational Church will be on your left just before a five way intersection. Take not the first left, but the fork to the left onto the Cold Pond Rd. Sign also says to Unity. 1 mi. from this intersection is the Cold Pond Community Farm, (sign says Cold Pond Community Farm) on the right across from a small pond.

From Keene: Take Rte. 10 north through Gilsum and then Marlow. About 4 mi. after Marlow take a left onto Rte. 123A. Follow this into S. Acworth, past the Village Store take the fork to the right uphill 4 mi. to the center of Acworth. In front of church take not the sharp right (which is dirt) but the fork to the right onto Cold Pond Rd. 1 mi. on the right across from small pond is farm drive.

Project Balance Sheet

| Date | Item | Expense | Income |
|---------------|--|----------------|----------------|
| Spring 2003 | Rootstocks | \$ 225 | |
| | Labor for lining out same | 100 | |
| Jan 2004 | Cut trees and brush, pile brush and stack cordwood | 4,320 | |
| Spring 2004 | Buy 5 piglets | 250 | |
| | Grain for pigs | 400 | |
| | 3 days pasture | | \$ 30 |
| Fall 2004 | Pasture seed | 50 | |
| | Sale of pork | | 800 |
| | Sale or use 16 cord hardwood | | 1920 |
| Winter 2005 | 4000bdft pine lumber | | |
| | Value after labor and milling | | 1000 |
| Spring 2005 | Brush pile party, beer&food | 50 | |
| | Graft rootstocks, labor | | 150 |
| | Mulch hay | 100 | |
| Summer2005 | Mulch garden area, labor | 50 | |
| | Plant corn, beans , squash | 50 | |
| | Yield of corn ,bean squash | | 100 |
| | Rotational graze 3 times(9 days) | | 90 |
| Fall 2005 | Sale cordwood | | 1440 |
| | Seeding | 50 | |
| | Brush | 100 | |
| | Spread compost | 50 | |
| Spring 2006 | Rasp, Blue, Strawberry plants | 427 | |
| | Mulch | 50 | |
| | Mow | 50 | |
| | 500lbs tomato | | 500 |
| | 20 bushel squash | | |
| Totals | | \$ 6322 | \$ 5930 |

1. Project name and contact info.

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2. Goals. Using techniques learned over the last 20 years of clearing pasture and crop land, we are setting up a model plot of reclaimed land that can show the cost comparisons and environmental benefits of clearing overgrown fields and pastures using low input strategies.

3.Farm Profile. Over the last couple of years since the application was submitted, we have made some large strides in making the Cold Pond Community Land Trust a financially viable and sustainable organization. After buying the 220 acre farm in 2003 we now have 6 of the 7 residential sites leased and are working clearing the brush and trees from the roughly 40 acres of ag land. About 15 acres of this total is rough pasture that is fenced in and rotationally grazed by our cattle, horses, sheep, pigs and chickens. About 2 acres is in row crops producing crops for sale and more will be added to this figure yearly

4.Participants. The first year we were mostly clearing brush and trees and rotating the hogs over the site. The project manager and two helpers plus 2 farm interns, worked roughly 15 days to cut unwanted trees, pile and burn brush and maintain hog fencing.

The Cold Pond Community Land Trust land use committee has been involved in the discussion of how the land will be used. Also, the northeast permaculture gathering was held on the land trust and input was given as to how the specific sites in question might be developed and integrated.

5.Project Activities. We began the clearing and thinning of brush and trees in the winter of 2004 on roughly 6 acres. Cord wood was cut and either sold or used for home use and brush piles were made, some of which were burned. 5 hogs were raised on a 2.5 acre piece and their house and fence rotated over the whole site. Large animals were also grazed over the stump sprouts twice during the season keeping sprout growth to a minimum. Pasture mix was sown in fall over this rooted up area. 200 Fruit tree seedling rootstocks were planted into beds in spring 2003 and will be grafted in the nursery beds before transplanting.

Spring warm up came right on the heels of sugaring season and as a result we were grafting onto the rootstocks at the last possible moment. We managed to graft about 100 of the plum, cherry, apple and pear stocks and had about a 50% success rate. These grafted trees will be planted into their permanent locations spring of 2006.

This past year (2005) , we continued to clear the site of brush and stones. We had a spring brush burning party/potluck, which was attended by approx twenty people from the land trust and surrounding community. Just as the snow withdrew in April, we burned eight brush piles and had a potluck supper which included, roasted local vegetables and meats while friends played music around the fires. The fields were rotationally grazed by cattle and horses three times over the summer keeping sprout and weed growth to a minimum and fostering the growth of grasses and clovers.

A small part of the land was planted by hand, to corn beans and squash. The area was about 50 by 75 ft and was the area most aggressively turned over by the pigs in 2004. Planting was done in hills, with spoiled hay mulch laid over the land between the hills. The crop grew well and matured in the fall

providing squashes and pole beans to the CSA, and allowing us to produce a seed crop of Longfellow Flint corn, an heirloom open pollinated corn variety. In the fall compost was spread on an enlarged area to be planted to vegetables and more mulch hay was spread over this same area to control weeds in anticipation for planting in 2006.

During the summer, one area that had mature pine was selectively logged to produce high quality logs for a home being built on the land trust. In the fall we cut and moved the remaining 12 cords of firewood, and this allowed the cleared area to be thoroughly brush hogged. We spread pasture mix over the entire area again, in an attempt to fill in the toughest brushy areas, and eliminate the chance for more weeds to grow. The grasses and clovers are becoming the dominant cover.

6. Results. The results have been mostly as expected. However less time was available for land clearing last winter than necessary to clear the proposed area. As a result part of the planned clearing has not started and likely will not start as part of this project. Ground prep for planting will take considerable time as well.

We have been very happy with the results as pasture has always been in short supply and the rapidity of turning this field into productive pasture has been gratifying. Other land that has been needed for pasture, can now be used for hay crops.

7 Conditions. The 2004 season was relatively wet and though the soft ground was easy for the pigs to root, some areas where hogs were pastured became muddy as a result. Otherwise conditions were as expected

8. Economics. We are expecting to show that clearing land this way will be an economically viable method as income is produced immediately (cordwood, pork products, rough pasture) as work begins and overhead costs are very low compared to having heavy machinery do the clearing. Experience shows also that the land is left in much better condition as the soil layers are not disturbed.

9. Assessment. n/a

10. Outreach. Every person who has visited our farm, roughly 30 visitors /month during snow free period has been given a tour of the field clearing progression since 1983. Though formal advertised pasture walks have not been made since the grant began we plan to host them this summer.\

We missed getting on the 2005 pasture walk schedule, but will be ready to host pasture walks this summer.