

Farmer Rancher Grant Program

Final Report

I. PROJECT IDENTIFICATION

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- Project Title: Sustainable agriculture education and practicum for Kansas small farmers and ranchers using permaculture principles of ecological systems design and management.
- Project Number: FNC09-793, Farmer/Rancher Group Project
- Project Duration: April, 2010 – March 2012
- Date of Report: March 16, 2012

PROJECT BACKGROUND

Overview of Group Farm Operations:

At Vajra Farm we maintain 45 acres of woodland, prairie, and organic vegetable and herb production. In 2009 we began planting fruit and nut trees in the creation of a food forest polyculture crop system.

At Prairie LoveSong Farm, Mrs. Hjersted operates a 160 acre farm, which is maintained largely by tenant farmers with approximately 4 acres under poultry and organic vegetable and fruit production. The larger portion of the farm is leased for the production of conventional crops including wheat, soy beans and prairie hay. In 2010, under the direction of Mr. Moring, 2 acres of the property has been developed for the creation of a polyculture fruit and nut crop operation.

At Chestnut Charlie's Nut Crop farm, Mr. Charles Novogradak operates 20 acres of mixed nut and fruit tree with early stage mature trees. This last year he has harvested and sold to market an excess of 15,000 lbs of organic chestnuts.

Prior sustainable Farm Practices:

By 2000 we began to implement organic vegetable practices and conservation efforts at Vajra Farm. These included introduction of prairie forbs, medicinal plants and various hardwood trees. By 2006 we began the implementation of permaculture design principles and practice.

At Prairie LoveSong from 2006 to 2009 a two acre pasture was used for a small organic livestock operation that included cattle, pigs, sheep and poultry. Other farming operation used conventional farming practices.

The sylvaculture operation at Chestnut Charlie's Nut Tree farm has been in development since 1995. Since 1998 Mr. NovoGradak's operation has been certified as organic.

PROJECT DESCRIPTION

GOALS

Our overall goal is create a community of small farmers and urban gardeners who embrace the ethics of permaculture and aspire to use and implement the principles of permaculture design, practice and conservation to create a sustainable food production system. Our objectives include the following:

- Provide a venue for the education of permaculture in the Kansas Valley Region by offering courses, workshops, farm tours and other events.
- To establish permaculture demonstration sites used for farm tours, course field trips and to train farm interns in care and management of ecological food forest gardens.
- Create a community organizational network to disseminate information about community events and educational opportunities. Through this network we will be able to raise the awareness of the larger community about the need to begin the transition to a sustainable and resilient food system in the face of a potential crisis in agriculture caused by energy depletion and climate change.

PROCESS

In order to establish an educational program to teach permaculture we started with the creation of a website for networking and promoting our courses, workshops and events. Grant funds were used for the creation of the Kaw Permaculture Collaborative's (KPC) website, www.kawpermaculture.org. We have also closely allied ourselves with the Sustainability Action Network, Inc. (www.sustainabilityaction.net) and the Transition Kaw Valley organization (www.transitionkawvalley.org), which support our stated educational goals.

Through the KPC, S.A.N. and T.K.V. websites we have promoted our permaculture courses and provided information for registration and content.

The KPC, SAN and more recently the TKV hold regular meetings to plan our collective educational events.

Our general plan is to organize a fall and spring, extended, 15 week permaculture design certification (PDC) course; one early summer nine-day intensive PDC course; one two-day introductory permaculture design workshop; a summer two-day food forest workshop; and a two-day permaculture urban garden and farm tour.

The creation and establishment of our three permaculture demonstration sites has become a crucial aspect for supporting our training effort. These sites are used as the focus of most of our permaculture design field sessions and whole-day practicums. Activities include design schemes for laying out polyculture food forests, tree guild companion planting, the integration of nitrogen fixing and insectary species. Demonstration of earth works, water harvesting and sylvaculture management (pruning, grafting and maintaining pollinator species) are also important activities.

Intern training has become another activity that supports our educational goals. Vajra Farm has had an on-going apprenticeship program since 2001 for teaching organic methods for vegetable and herb production. In 2009 we changed our focus to include internships for permaculture design and practice. With the growth of the KPC apprenticeship program in 2010 and 2011 we have expanded to include Prairie Lovesong Farm, the Karlin Family Farm and Forest Floor

Permaculture urban gardens.

PEOPLE

The Kaw Permaculture Collaborative has been largely involved in supporting our efforts in providing an educational venue for permaculture. The major participants include the grant recipients, and many farmers and individuals in a tri-county area of Douglas, Jefferson and Leavenworth counties:

1. Vajra Farm, and Prairie Lovesong Farm were hosts for training courses, workshops and farm tours on at least 25 occasions.
2. Chestnut Charlie's Nut Tree farm was a host on multiple occasions for a permaculture practicum (a full day hands-on field session), demonstrating fruit and nut tree management, pruning and grafting, and farm tours.
3. Michael Almon's Forest Floor Permaculture was a host on multiple occasions for permaculture practicums, and demonstration of passive solar building design and solar water heating systems. Mr. Almon participated as an assistant lecturer for our permaculture design courses.
4. The Douglas County Extension office was a host site for the demonstration solar photovoltaic systems and helped provide the lease of classroom space at the Dreher Family 4-H Foundation building. The main contact person was Mr. William Wood, County Extension Specialist.
5. Peter Maynard of 35590 183rd St. Leavenworth, KS has hosted a permaculture practicum and farm tours on multiple occasions.
6. Timothy O'Brien of Esperanza Farm, 2979 Republic Rd. Oskaloosa, KS, has hosted a permaculture practicum, field day sessions and farm tours on multiple occasions.
7. Jeremy and Amber Lehrman, hosted a field day session and urban garden tours at their food-not-lawn gardens at 2409 Brookside Dr. Lawrence, KS.
8. Edward and Dianna Peden at SubTerra Castle Project, 15513 Missile Base Rd. Eskridge, KS hosted a permaculture practicum.
9. Kevin Good from Solar Energy Solutions, Lawrence, KS organized renewable energy field day tours.
10. Michael Morley from SIPSmart Building Systems, Lawrence, KS helped as a guest lecturer.
11. Mr. Skyler Adamson from Lawrence, KS has become employed by Mrs. Hjersted (Prairie LoveSong Farm) as the food forest project manager and farm hand. He will be responsible for maintaining the forest gardens for 2012 and beyond.
12. David Yates from Lawrence, KS was the consultant employed to set up the Kaw Permaculture.org website.

RESULTS

Farm Activities:

At Vajra Farm we have completed a forest garden design layout and have planted most of our nut trees and all of our planned fruit tree species. Figure 1 and 2 shows the current forest garden layout at Vajra Farm, which contains the major elements that were planted in 2009 through 2011, including fruit, nut trees, shrubs and berry vines. The planted hardwood tree species include Burr Oaks (3), Black Locusts (5), Chinquapin Oaks (10), Chinese Chestnuts (15), Carpathian Walnuts (3), Hazelnuts (23), Paw Paws (21), Pecan var. (20), Persimmons (4), Shellbark Hickories (3) and Witchhazels (10). Fruit trees included Apple varieties (9), Asian Pear (6), Cherry varieties (5), European Pears (2), Peach varieties (8) and Grape vines (30). As of January 2012 all trees planted during the grant period have survived with one exception of an apple tree. Nitrogen fixing shrubs planted were Siberian Pea Shrub, Autumn Olive, Goumi, Bush Clover, and other perennials.

At Prairie Lovesong Farm we have completed a master plan for the development of a forest garden nut and fruit tree crop system, and the construction of three large water harvesting swales. By the end of 2010 we also planted a cover crop and the Pecan trees (14) on the lower swale berms. In the spring of 2011 we planted over 100 fruit and nut tree species and varieties. Figure 3 shows the forest garden layout, which includes Apples (10), Cherries (16), Paw Paws (7), Peach/Nectarine/Apricots (18), Pears (18), Persimmons (4), Plums (5), Quince (6).

Hardwood and nut tree species include Almonds (8), Black Locust (10), Chinese Chestnuts (13), and Shellbark Hickories (5). Shrubs species included Autumn Olive (10), Aronia (30), Cornelian Cherry (6), Elderberry (23), Goumi (10), Hazelnut (22) and Kousa Dogwood (10). Of the named species we experienced about a 75% survival with losses due to deer browsing and drought.

Networking:

The KPC website was completed in mid January 2011. This website has a good rating with major web search engines world-wide. Visit <http://www.kawpermaculture.org>.

The KPC also maintains a Google Groups list-serve with serves members by allowing interactive group postings of information regarding farming issues, resources, information and events.

Visit <http://groups.google.com/group/kpc-dev>.

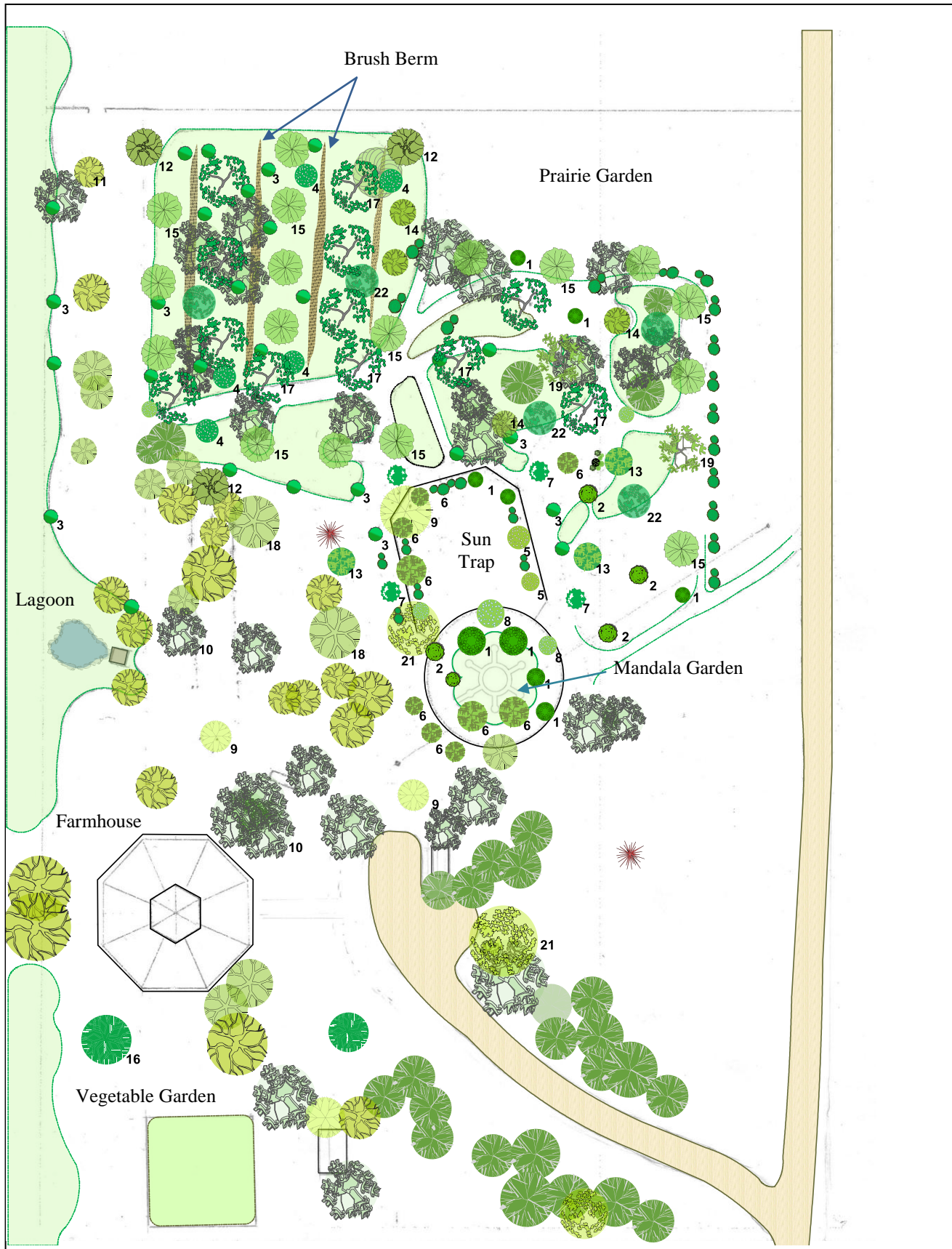
Permaculture Training:

We successfully completed four certified permaculture design (PDC) courses with 49 course participants. For the spring of 2012 we currently have 18 students registered in our 15 week PDC course. We have two additional scheduled educational events for spring 2012, a 2-day permaculture workshop and a 9-day PDC intensive. We have awarded to-date 21 PDC graduates with certifications from the Kansas Permaculture Institute. All course participants were surveyed to evaluate the quality of the PDC courses. In categories of quality of training facilities, content and instruction, student evaluations were consistently ranked as “exceeding expectations” or “excellent”.

Activities open to the public:

- We organized and lead two annual permaculture urban garden and farm tours in Lawrence, KS and southern Jefferson County, KS in June, 2010 (30 participants) and July 2011 (25 participants).
- In 2010 we organized and presented a one day permaculture workshop at Vajra Farm (10 participants), and a one day nut and fruit tree growers workshop at Chestnut Charlie's Nut Tree Farm (30 participants).

Figure 1, Food Forest Layout on Vajra Farm

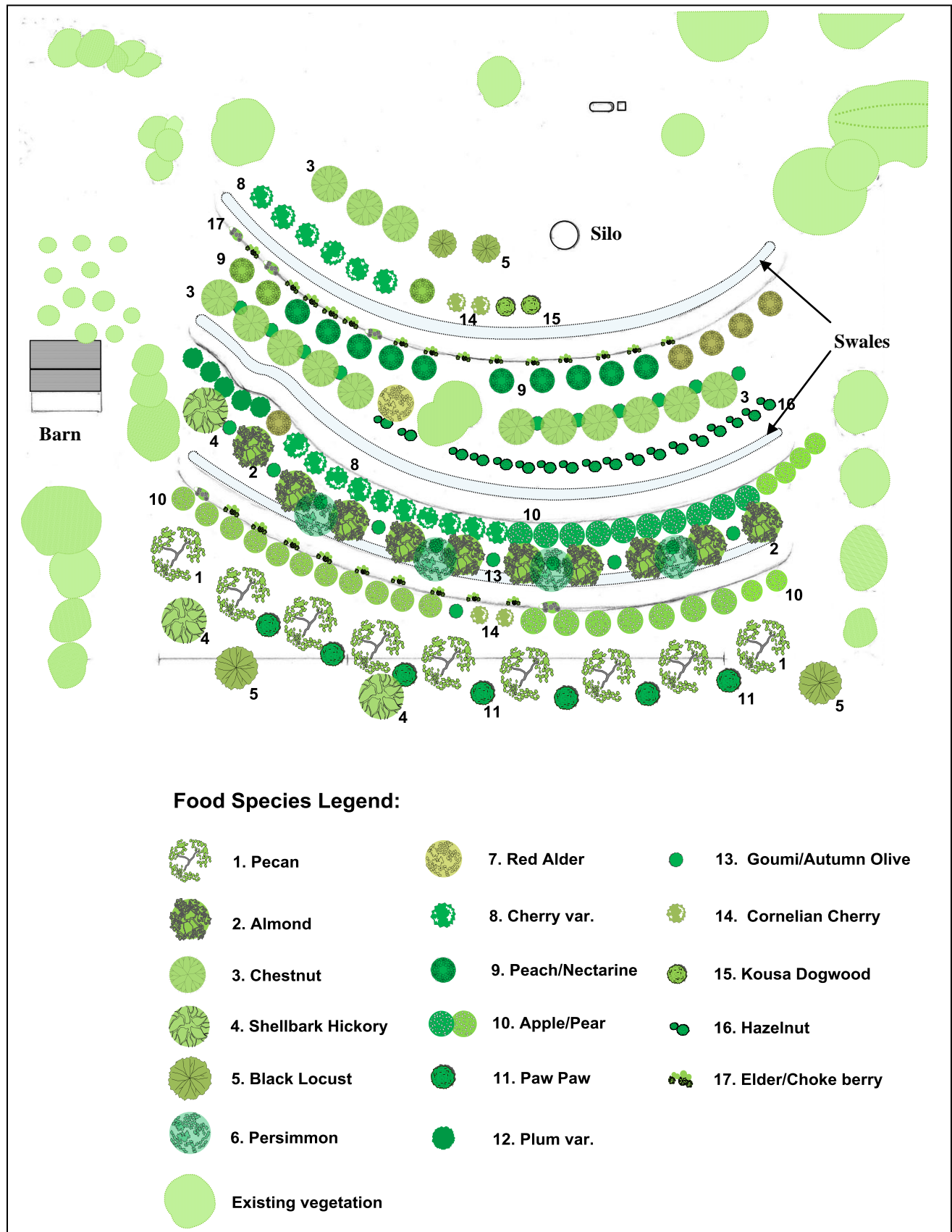


	1. Apple,	9		23. Witchhazel	10+
	2. Cherry,	5		24. Wild Plum	2
	3. Paw Paw,	21		25. Hazelnut	23
	4. Pear, Asian	6		26. Red Cedar	27
	5. Pear, European	2			
	6. Peach	8		Nitrogen Fixing Species*	
	7. Persimmon	4		Bristly Locust	5+
	8. Plum,	2		Autumn Olive	20+
	9. Mulberry	4+		Goumi	4
	10. Wild Cherry	20+		Russian Pea Shrub	10+
	11. Black Walnut	20+		Bush Clover	10+
	12. Burr Oak	3		American Senna	20+
	13. Carpathian Walnut	3		Wild Indigo	30+
	14. Chinquapin Oak	4		Milk Vetch	
	15. Chinese Chestnut	15		Red Clover	
	16. Silver Maple	2		White Clover	
	17. Pecan	12		Partridge Pea	
	18. Red Bud	5+		Edible Shrubs & Brambles	
	19. Shellbark Hickory	2		Black Raspberry	
	20. Osage Orange	1		Blackberry	
	21. Cottonwood	3		Gooseberry	
	22. Black Locust*	5		Elderberry	
				Wild Strawberry	
				Red Currant	
				Service berry	
				Aronia berry	
				Buffalo berry	

Bristly Locust	5+
Autumn Olive	20+
Goumi	4
Russian Pea Shrub	10+
Bush Clover	10+
American Senna	20+
Wild Indigo	30+
Milk Vetch	
Red Clover	
White Clover	
Partridge Pea	

- Black Raspberry
- Blackberry
- Gooseberry
- Elderberry
- Wild Strawberry
- Red Currant
- Service berry
- Aronia berry
- Buffalo berry

Figure 3, Food Forest Layout at Prairie Lovesong Farm



DISCUSSION

This grant has provided our KPC and its recipients with the resources to create an effective permaculture educational program and promotional venue through its website. It has also helped create resources for the establishment of training sites for permaculture in the Kansas and Missouri area.

The advantages of this project are seen at the rural and urban community level. In the past two years the general awareness of issues of food security has grown considerably. Permaculture has become viewed as an alternative to our current food system, which has ever increasing vulnerabilities. Interest in permaculture ethics and principles has grown considerably in the Kansas City area as seen by increased enrollment in our courses and activity on multiple internet venues. Disadvantages that our project pose to the community is the long lag time to demonstrate success, as well as political and ideological impediments to change in thinking.

Vajra Farm and Prairie LoveSong Farms have permaculture intern training programs that are expected to grow substantially in 2012 and beyond. We envision being able to establish intern research projects for teaching ecological principles and collecting data on beneficial species interactions for agroforestry and edible tree crop operations.

The overall outcome of the creation of our food forest projects will be realized as our planted trees reach maturity in 5 to 15 years. These forest gardens, while properly maintained, will demonstrate to other farmers in the region the potential for increased productivity through diversity of cropping systems. In the face of a faltering industrial agricultural system due to energy depletion, soil degradation and uncertain water resources, permaculture will become a critical option for economic stability and food security.

PROJECT IMPACTS

The major impact of this project is the education of farmers to opportunities in agriculture that go beyond our current day industrial agricultural system. The social impact includes the growth of public discussion of the need to increase and augment our food security. Permaculture is a large part of a global "Transition Town" movement, which is active in mobilizing local communities for changes that we will face in the near future. An offshoot of our KPC organization activities is the creation of the Kaw Valley Transition organization, which has been recognized as the 100th formally established entity in the US. For more information visit, <http://www.transitionkawvalley.org/>

OUTREACH

Some of the outreach efforts of our project can be seen through the project description and story posted on our website, and our project described on the international Permaculture Research Institute's "Permaculture World-Wide Web. <http://www.permacultureglobal.com/projects/398-kaw-permaculture-collaborative>.

In addition, we have been featured in local news stories and taken part in regional workshops and farmer conferences:

May 8, 2010, KPC permaculture crop mob at Vajra Farm. A group of seven volunteers participated in brush clearing for preparation of a forest garden site.

June 2, 2010, publication of grant narrative on Google Groups list-serve site.

http://groups.google.com/group/kpc-dev/browse_thread/thread/95ceb3f430fd1c36#

June 26, 2010, KPC agroforestry workshop: Integrated Urban and Farm Permaculture Food Production Systems at Michael Almon's Urban Permaculture Project and Chestnut Charlie's Tree Crop Farm in Lawrence, KS. The workshop demonstrated how permaculture principles and design concepts can be applied to both urban and farm scale settings.

July 10, 2010, Workshop on Broad Acre Permaculture at Vajra farm, 10 am – 4 pm. This event included a lecture outlining the history of the farm, the construction of a passive solar home, and the creation of a food production system based on permaculture design principles.

July 18, 2010, 2nd Annual Permaculture Tour of Farms and Gardens. This guided tour started at Forest Floor Permaculture, Lawrence KS, and proceeded through a total of six urban and rural permaculture sites.

Aug. 2010, publication of permaculture project story, courses, lectures and events on Google Groups site (<http://groups.google.com/group/kpc-dev/topic>), and KPC websites.

Sept. 25, 2010, Nut Grower Harvest Workshop at Chestnut Charlie's Nut Tree Farm. Charlie NovoGradac discussed the history of his organic nut crop operation. The chestnut harvest was in full swing and participants joined in the chestnut gathering. Discussions included care and maintenance of the orchard, observation and comparison of mature and productive chestnut, pecan, black walnut, Carpathian walnut, hazel nut trees and other fruit and berry selections.

Oct. 9, 2010, NCR SARE Grant writer workshop. Among the program presentations was the KPC farmer/rancher project presentation by Steve Moring. About 30 people attended the workshop.

Oct. 25, 2010, Lawrence Journal World story of SARE farmer-ranch (KPC) project: **Nature at work: Permaculture teaches sustainable techniques to growers**, See publication at <http://www2.ljworld.com/news/2010/oct/25/nature-work-permaculture-teaches-techniques-using/>

July 23 & 24, 2011, 3rd Annual Permaculture Tour of Urban Gardens and Farms. This event was a guided tour of six urban sites in Lawrence, KS and 6 rural farm sites in Leavenworth, Jefferson and Douglas Counties in Kansas.

Nov. 3-5, 2011, 19th National Small Farm Trade Show & Conference in Columbia, MO. Presentation by Steve Moring and Maryam Hjersted for the 2011 NCR-SARE Farmers Forum, entitled "Permaculture Design and Practice for the Small Farmer". About 40 people attended the seminar.

Feb. 10 & 11, 2012, Rural Advantage/ Healthy Farms Conference at Lied Lodge in Nebraska City, NE. Presentation by Steve Moring for the NCR-SARE Farmers Forum, entitled "Permaculture Principles for the Small Farmer". About 20 people attended the seminar.

PROGRAM EVALUATION

My evaluation of the SARE Farmer/Ranger grant program is excellent. I found that interaction with the program officer was easy and cordial. She was very helpful in discussing the grant and its guidelines. The farm visit was a very positive portion of the experience.

I feel the type of work that we are involved in, that is, farmer and producer education will be

fundamental to our local food security. I feel that the USDA should make more funds available for permaculture-related projects. I feel that Congress should seriously reconsider priorities of the Farm Bill, and increase substantially the funding for small farm operations.