

Permaculture Vision Birchhof: Design concept

Project data



deutsch française italiano english

Permaculture-design as a forest garden (on 598malms), combined with polyculture and layered cultivation employing a variety of plant guilds.

common pilot project:
Co-operation "Vision Birchhof"
Projects "permatu"
Nursery "Bio-Birchhof"
Permaculture-Academy "DownToEarth"

location:
"Vision Birchhof", Co-Operative, President: Roger Gündel, Oberwil-Lieli (AG) www.visionbirchhof.ch

project leader:
Matthias Brürck, Landscape architect, Permaculture designer in training
www.permatu.org

consultant:
Markus Pölz, Permaculture designer
www.permakultur-design.com

scale:
1:400 / A1

date:
18th march 2015

About Permaculture

The expression permaculture is derived from the words „permanent“ and „agriculture“. It combines the know-how of traditional agriculture with new developments in other fields from around the world. Permaculture understands itself as movement, directed against industrialized agriculture. It seeks to stop the waste of energy and soil caused by highly specialized, mechanized systems of production, without reverting to the labor-intensive horticulture practices in the past. Permaculture systems do not work against, but with Nature. It does so by consciously fostering stable mixed crops and symbiotic relationships. It uses natural cycles to save both space and time - and to reduce the consumption of energy, water and non-renewable resources. Beyond the scope of agriculture, these principles also open new perspectives on educational, social and economic questions, especially with regard to an economy of commons.

The Vision Birchhof

Birchhof (598m above sea level) is a biodynamic farm, located near Oberwil-Lieli AG, Switzerland. The farm has founded a special co-operative named *Vision Birchhof* to further develop its operations and to promote sustainable agriculture. Birchhof is an existing CSA-farm (Community-supported Agriculture), and as such has already put some aspects of permaculture into practice. Members of the co-operative who work on the farm receive organic vegetables from the farm. They can also give financial support to the co-operative to receive the same benefits.

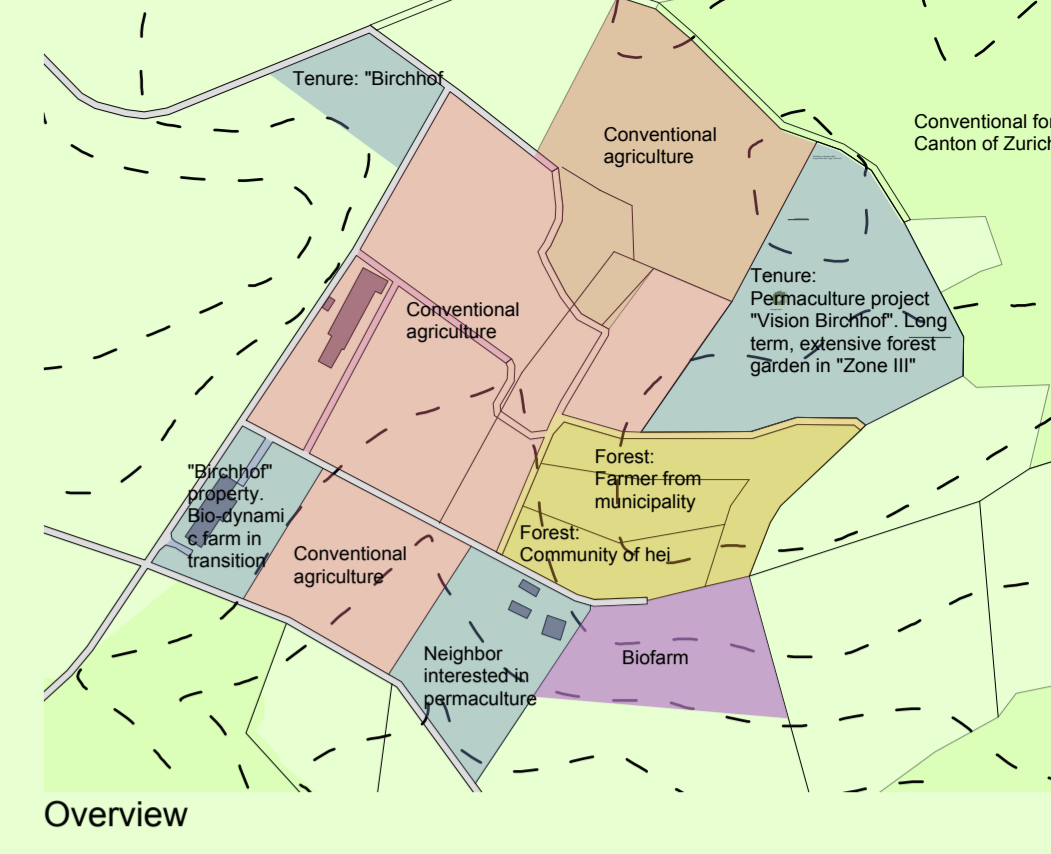
The farm has designated an area of almost 2.7 ha (approx 7 acres), which will now be cultivated according to the principles of permaculture to complete the vision. A forest garden has established itself as a well-suited possibility for the given geographic circumstances. Such a garden also accords well with the views of the farmer and members of the co-operative. It features a combination of polyculture and layered cultivation. Even today, the area is cultivated using yearlong vegetables and herbs with biodynamic methods.

Within four years, we will create a series of areas designed according to the principles of permaculture. The first step consists of planting trees and hedges. Then, we will create the first cultivated area, the first compost garden and the first raised beds in the suntrap.

This project is a first in Switzerland. Permaculture has never been employed on such a large scale in this country before. We believe that this project can serve as an example of the enormous potential of permaculture. By observing and analyzing the methods employed in this project, our goal is to show that this kind of permaculture is capable of efficiently producing healthy and savory food. Simultaneously, it conserves energy and promotes biodiversity. We will also organize courses on a yearly basis, where participants can experience permaculture hands-on and spread their knowledge.

Key

- trees with large canopy (eg. walnut, legume, sweet chestnut ...); **total 15 incl. border area**
- trees with small canopy (fruit tree, sorb-tree, legume, juneberry ...); **total 14 incl. border area**
- coppice trees (ash, hazelnut, poplar), **total 10—20**, to reduce branches (for the raised beds); oppied every 6—8 years; includes fungal cultures
- target to medium wild, fruit and berry bushes ... **total 475**.
- small to very small wild, fruit and berry bushes ... **total 1101**.
- wild hedge with thorny wild fruit and groves to feed birds; acts as protection from big game; fostered by pigs and goard; **total 3050m2**
- tilled field; 2m broad with grass mulch; **covers 2274 m2**
- covered bed with perennial wild and cultivated vegetables; **total 2120m2**
- covered bed with perennial wild and cultivated fruit and vegetables; **total 1470m2**
- ground vegetation with tree guilds; **total 2827m2**; provider, crop and distractor plants
- mulch meadow; at least 3 times the tilled field (2274m2 x 3 = 6822) **13224m2**; includes mulch for other areas and reserves
- mulched are around compost gardens and raised beds **1813m2**
- swamp are for cultivation of wild vegetables (typha) and biomass (mulch) **348m2**
- storage basin runner ducks and human well-being **100m2**
- raised beds **277m2** (effectively x 2.5 = **693m2**)
- 1 compost area used in rotation
- meeting area
- temporary enclosure for farm animals as employees for construction and tending of the cultivated and green areas
- shelter for indian runner ducks

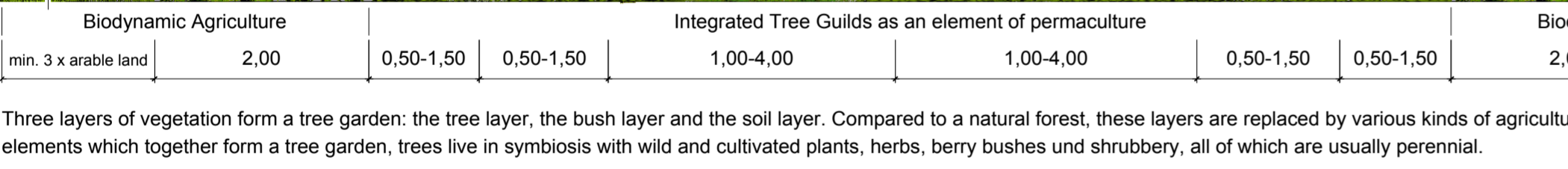
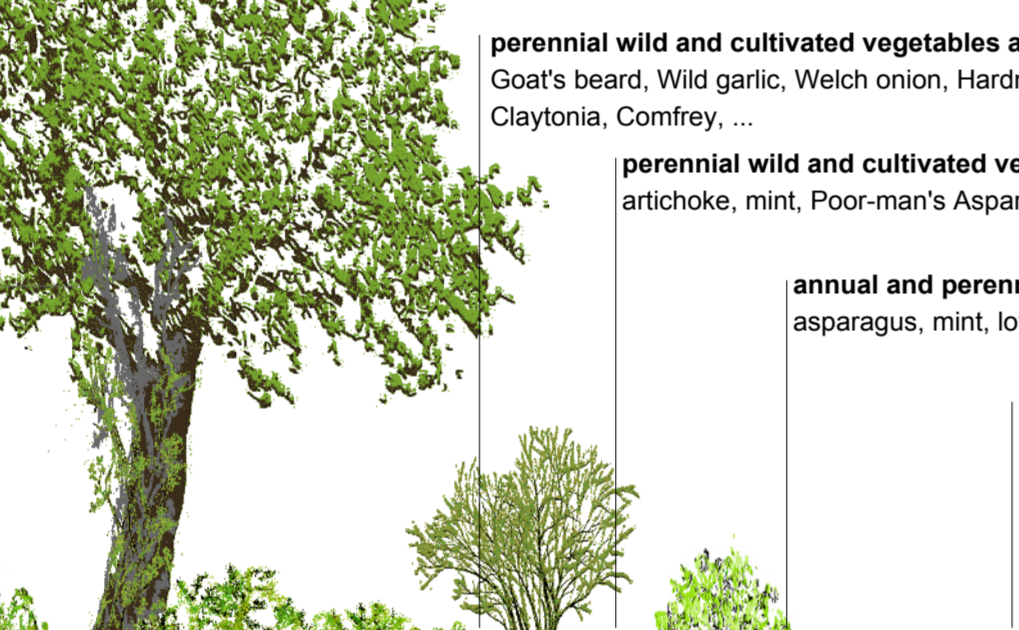


Combination of "tree guilds" and agriculture biodynamique scale 1:100

Staggered Vegetation Layers



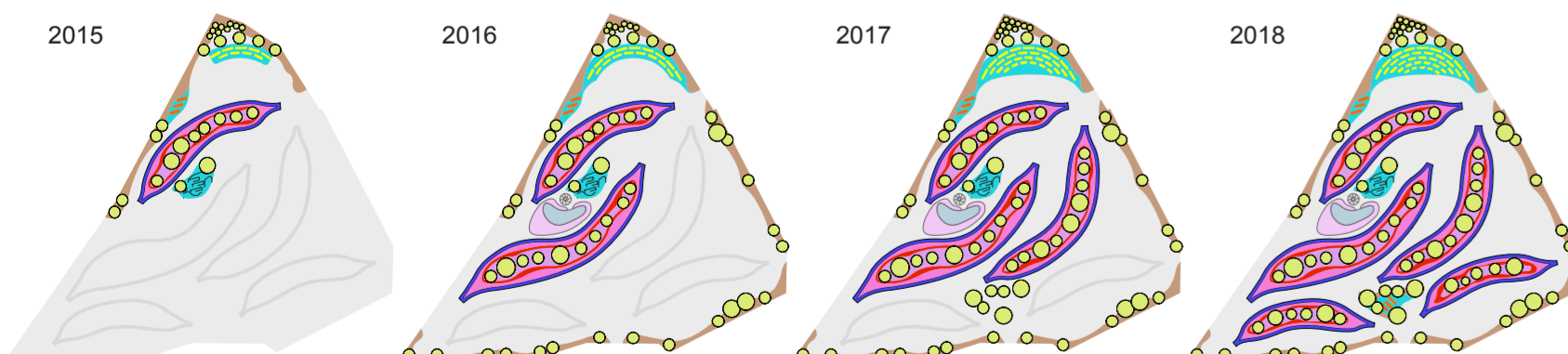
Areas of the ground cover layer



In addition, plants with the following roles are also found in tree guilds:

- Crops for harvesting, including fruit, nut, vegetables, grains, wood and others.
- Supporting plants: some of these, such as leguminose plants, bind atmospheric nitrogen and make it available for other plants. Comfrey, on the other hand, transport mineral salt from deeper layers of the soil to the top. These plants live in symbiosis with rhizobia, a kind of bacteria, which bind atmospheric nitrogen and naturally fertilize the soil. Among these are some kinds of "pioneering plants". Well-known examples of such plants are those from the leguminose family, such as lupines, beans, peas, lentils and robinias. Some supporting plants are used as green manure. Supporting plants are an essential part of various mixed plantations in permaculture.
- Distractor plants, which protect crops from vermin by attracting them onto themselves or keeping them away. One example for these is topinambour. Generally, every single element should have as many applications as possible in permaculture. Simultaneously, every single application should be present in as many elements as possible. Therefore, a single plant in a tree guild can have multiple applications, sometimes depending on the current stage of its growth cycle. This results in a large, yet stable and productive, variety of plants.

Implementation Stages



By implementing permaculture areas, Vision Birchhof will gradually begin trials with the different kinds and varieties of plants. To support them in their experiments, members will also receive recipes involving the various crops harvested here.

With a lot of personal commitment, supported by various workshops, we plan to realize the forest garden in cooperation with "Vision Birchhof" and the permaculture academy "DownToEarth" in four steps. This way, we can use the experience we gather in the first steps while implementing more advanced stages.

Without significant personal commitment and voluntary work by all involved, the implementation of a permaculture project on such a large scale would be impossible to fund, even with crowdfunding. Voluntary work allows for a relatively cost-efficient realization and also helps strengthen the bond of everyone to their garden - the exact goal of the basic ideas behind co-operatives and permaculture.

The proceeds from workshops and harvest during the first stage will be invested into the implementation of further stages. Because the basic planning for the entire area has been finished, and a significant part of the planning stages has already been done, costs will be significantly lower in the coming years. Furthermore, we will continue to minimize costs in the coming years through our continued, personal commitment, workshops and special events.

