

## **What is a Permaculture Course?**

a generalized description

Just as every place is unique so too is every individual, organization, and community. With this understanding our courses are adapted and refined to meet the needs and focuses of the participants attending it. Past participants have included farmers, villagers, technology workers, NGO employees, foreigners, farm managers and other types of agriculturalists, government workers, architects, urban planners, social workers, and all manner of professionals. In reality, these courses can be designed to assist individual, group, community, village, or business, whoever they are and whatever they do, to become more functional and sustainable.

To do this, these trainings assist everyone in grasping the deeper understandings necessary to create a sustainable home, farm, community and village, as well as providing techniques, steps, and strategies that can be immediately applied towards this. Through class talks and discussions, photos and films, games, exercises, and hands-on projects participants are exposed to ideas and understandings in multiple forms and times. As an example, an idea or understanding is introduced to the class via discussion. Like an ever expanding spiral the course then moves on to the next thing, and then the next, eventually returning to the original idea or understanding but from a different view point and/or application. In this way the participant is exposed multiple times from different perspectives and in different situations to important understandings and knowledge critical to creating sustainable systems. Coupled with easy to understand hands-on projects that demonstrate the adaptability of various strategies for water harvesting and cycling, soil building and health, creating farm diversity, appropriate technologies, and more the participant is immersed in practical real life solutions to the challenges facing them.

**SUBJECT MATTER COVERED IN COURSES INCLUDE:**

**PERMACULTURE ETHICS AND PRINCIPLES**

**Ethics** are what help us decide if something is right to do or not. In these trainings, as expressed in Permaculture, we emphasize the ethics of; 'Earth Care', People Care', and 'Fair Share/Re-investing Surplus'.

**Permaculture Principles** can be understood as guidelines for how to do what you have decided to do. The following are examples of some of these principles,

**Observation:** Each place and community is unique, thus every technique, strategy, or 'solution' must be appropriate to these. Observation is the foundation of how we come to understand a place or people.

**Stack Functions:** Each element (an element is a 'part' of the system/farm ....a water system, water tank, tree, fence, pond, building, etc.) should have multiple functions (benefits).

**Make the least change for the greatest effect:** Skillfully interact with a system to minimize resource and labour inputs while stimulating the system to adjust and grow, as it best knows how.

**Optimize Edge:** In nature these are the most diverse and productive areas in an environment. In Permaculture we look to nature and mimic the way it works.

**Use local and renewable resources**

**The problem is the solution:** A problem is just the system telling you that something is not working and needs attention. This principle is about how we think about and approach a situation. It is about understanding that the 'solution' is contained within the 'problem', either directly or informationally.

There are other principles, all of which act as guides to help the farmer or villager make decisions, to take actions that are crucial for creating a truly sustainable farm/village

## **FLOWS AND PATTERNS**

**Flow** is the movement of resources and energy (same, same) through a system, e.g. farm, village, organization, community, etc. To understand a place (farm, village, landscape) one must understand this continual flow of energies and resources. Flows can be considered NATURAL (flows that happen without human involvement) or HUMAN (flows that originate from humans) and include; water, wind, fire, solar, human populations, information, economic, and many others.

**Patterns** are flows that repeat in predictable arrangements. Patterns are the next level up in complexity that increases the ability, skill level,

and success rate once one is able to observe and work with them in a more harmonious way. In this course we teach pattern literacy (the ability to observe and 'read' patterns) and application (created patterns that we install into a place, e.g. water systems, cropping patterns, resource flows, etc.).

## **SITE ANALYSIS**

**Observation, flows, and patterns** form the basis for a deep understanding of a place. Coupled with documentation the farmer/villager is equipped to take the initial steps to creating a more functional and sustainable farm and village

## **WATER**

All aspects of water are covered. **Water harvesting, storage, cycling and recycling** are discussed, many examples seen in photos, exercises done, walkabouts to observe water taken, and hands-on work done to give the participant in depth exposure and learning opportunities with all aspects of water and water cycling.

## **SOIL**

**Soil** is a dynamic living community. It is the farmer's job to nurture and grow soil. With strong healthy soil the farmer will have strong and healthy plants, which leads to strong and healthy humans. This basic understanding, as well as the techniques and strategies for building healthy soil are central to our trainings. **Composting (piles, tea, soup), Vermicomposting (worms), Sheet Mulching, Indigenous Micro-Organisms (harvesting, propagating and uses)** are techniques we teach for soil health. A couple of these are explained below.

## **CROPPING**

Both annual and perennial cropping is covered, with an emphasis on diversification and more complex cropping patterns, both of which are critical for farm health and sustainability. Tropical soils are depleted soils due to high temperatures and rainfall. The farmers learn about perennial cropping that supports soil health. **Bio-Intensive, Companion Planting, Guilds, Hedgerows, Windbreaks, Living fences, and Jungle Gardens** (perennial cropping pattern model on a jungle) are types of cropping strategies taught in our courses.

## **ANIMAL SYSTEMS**

Animals are critical aspects of cycling resources on the farm thus reducing the external inputs with their associated costs and impacts. Animals link systems, thus creating cycles that lead to a more holistic farm.

**APPROPRIATE TECHNOLOGIES:** This critical concept is introduced via an in depth discussion of what makes something appropriate. From here participants are exposed to a vast range of technologies that are based on local and renewable resources.

**DOCUMENTATION:** Documentation is critical to many aspects of the farm. It forms the basis of an ongoing learning process for the farmer/villager as from year to year the accumulating data reveals successes, failures and patterns. Documentation is vital to the farmer and community becoming empowered in making decisions and choices that lead to a more diverse, sustainable and secure future. It is also critical to the farmer and community in securing traditional knowledge, plants, resources, and practices as historical and essential to their life and culture. This is important as globalization allows transnational corporations to 'extract' cultural knowledge and resources, claiming them as corporate property. Thus traditional communities lose access and benefits of what had been for hundreds of years a communal, shared resource.

Hands-on projects include:

**GREYWATER SYSTEMS:** Greywater is all used household water except that from the toilet. These simple, effective and adaptable systems will reduce the possibility of water borne diseases, and reduce overall water usage. Linked with food production, as we do in these trainings, a greywater system also increases food security.

**SEED BALLS:** These easily made little balls of soil, compost/manure, and seeds are an excellent strategy to introduce plant species and diversity that have many supportive functions on the farm/village with a minimum of input and time. These functions can include; beneficial insect habitat, fodder, fuel, soil building, famine or emergency food sources, beauty and source material for medicine (both human and

animal), value added products, fertilizer, insecticide, pesticide and other farm preparations. These balls are used more for introducing perennial species along edges, margins, jungles and other non-annual cropping areas.

**A-FRAME:** This easy to make tool of bamboo and string/wire allows the farmer/villager to find contour (a level line across unlevel land) on sloping land to create a level growing terrace for soil and water conservation, as well as for creating a swale or water harvesting structure. Using a tape measure to calibrate the A-Frame for a 2% or 4% slope this tool can be used to create water ditches or swales that will move water across a sloped landscape with minimal to no erosion, while either promoting (0 - 2% slope) or minimizing (2% - 4% slope) infiltration. Poor villagers have also used this tool in building construction.

**SHEET MULCHING:** More correctly understood as Sheet Composting, this simple technique of soil building provides multiple benefits to the farmer/villager while minimizing time and labour inputs. These benefits include; reduced labour (allowing nature to do the work instead of the farmer), increasing soil nutrients, increase of beneficial soil micro-organisms, suppression of weeds, increased soil water retention, and increase in soil organics. Typically this technique uses newspaper and/or cardboard as sheeting and carbon source. Due to the economics and higher populations in many, many areas the recycling of these materials provides a critical income for many people. Thus, usage either costs money or impacts an already stressed community. Additionally, in most if not all of the majority world heavy metals such as lead and cadmium is still used in the inks of these materials. In our trainings we look to the local environment for 'sheeting' material, often using local plant materials such as palm fronds (large solid palm leaves) and banana leaves.

This technique can be easily adapted to create instant garden beds for use on roofs, limited urban spaces, hard packed soil, or where the soil is very depleted or contains toxins.

**IMO's (Indigenous Micro-Organism):** Effective Micro-Organisms (EM's) are now a very popular strategy in organic farming worldwide. The vast majority of sources for EM's are commercial, non-local and use a factory model of production, thus resource intensive and costly. In

our trainings we strongly encourage and demonstrate localizing resource needs. IMO's are EM's that are harvested on-site that empower the farmer with a minimum of cost (a small amount of rice and raw sugar is used). Due to the wide applications of IMO's (greywater and blackwater [toilet] systems, plant fertilizer, pesticide, animal health, aquaculture, composting, soil building, etc.) this technique is very popular with course participants. One farmer reported an increase in milk production of one litre per cow per milking, with a higher fat content in the resulting milk.

**PASSIVE SOLAR WATER HEATER:** loss of jungle due to fuel wood harvesting has led to soil erosion, habitat and species loss, negative impacts on water and the water cycle, degradation of air quality and other environmental impacts. With an easy to understand concept, simple construction, and an emphasis on used or recycled materials this passive solar water heater allows the farmer or villager to reduce their fuel wood needs with the associated savings in time and labour, as well as reducing the farms or villages impact on its local environment.

## **CONCLUSION**

Like Permaculture itself, our course and the application of its teachings will be site specific. Subjects covered and hands-on projects can be specific to your organizational goals, site, and the participants needs.

It is possible to shorten or lengthen the course to fit your timeframe, though it is important to understand that there is a direct relationship between course length and overall comprehension and understanding by course participants. This is due to the cyclic and holistic way in which we structure and run the course.