

Permaculture

1. Meaning

Permaculture is an approach to agricultural design that focuses on whole systems thinking, as well as using or simulating patterns from nature. Permaculture can be understood as the growth of agricultural ecosystems in a self-sufficient and sustainable way. This form of agriculture draws inspiration from nature to develop synergetic farming systems based on crop diversity, resilience, natural productivity, and sustainability.

Nowadays synonymous with Permanent culture in its broadest sense, permaculture is a global ethic method for designing integrated systems based on the idea of sustainable development. Therefore, human activities must consider natural ecosystems and operate in harmony with them.

Permaculture has 3 core tenants:

- Care for the earth. In other words, help all life systems continue to exist and multiply. Because if we don't have a healthy planet, humans can't exist at all.
- Care for the people. Allow people to access resources they need to survive.
- Fair share. You should only take what you need, and reinvest any surplus. Any extra can go forward to helping fulfill the two other core tenants. This includes returning waste products back into the system so it can be made useful again.

2. The Principles of Permaculture

- Observe and interact – by taking the time to engage with nature we can design solutions that suit our particular situation
- Catch and store energy – by developing systems that collect resources when they are abundant, we can use them in times of need
- Obtain a yield – ensure that you are getting truly useful rewards as part of the working you are doing
- Apply self-regulation and accept feedback – we need to discourage inappropriate activity to ensure that systems can continue to function well
- Use and value renewable resources and services – make the best use of nature's abundance to reduce our consumptive behavior and dependence on non-renewable resources

- Produce no waste – by valuing and making use of all the resources that are available to us, nothing goes to waste
- Integrate rather than segregate – by putting the right things in the right place, relationships develop between those things and they work together to support each other
- Use and value diversity – diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides

3. The Economics of Permaculture

- Permaculture aims to improve the quality of life, not only for us humans, but also for our flora and fauna. It also aims to make the living conditions for our cattle as natural as possible and factory farming and other practices that imply to raise animals under quite poor conditions should be avoided at all costs.
- The development of community organizations such as SEL (Local Exchange System), generating short circuits, social links, solidarity, and community cohesion
- Permaculture aims to make agricultural processes sustainable in the long run. Yet, this also implies that farmers often have to refrain from short-term gains. Moreover, permaculture may also slow down our overall technological progress since it will not support or advocate genetic engineering or other artificial processes in agriculture.

4. The advantages and disadvantages of Permaculture

1) The advantages

- Reduction in waste, the concept of permaculture aims to use our resources in the most efficient manner.
- Permaculture can help to mitigate soil pollution
- Less air pollution: aims to make agricultural processes more sustainable and to protect our nature whenever possible, it also aims to reduce our emission levels. Through permaculture, less agricultural machines that emit harmful gases into our atmosphere will be used.
- Less groundwater pollution
- Sustainable agricultural concept. Since the concept of permaculture implies using our natural resources as efficiently as possible and also to avoid pollution as best as

possible, it can be regarded as a quite sustainable concept. In fact, this attitude towards life is exactly what we need right now in order to solve our environmental problems.

- Self-production of energy and use of renewable energy sources: the concept implies that farmers also should try to produce their own energy: solar cell, hydropower, etc.
- Diversifying against risks, farmers may not rely on monoculture, but will plant a variety of different crops.
- Protection of the natural habitats of animals and plants and mitigation of the endangered species problem
- Savings in water, permaculture also aims to use our water as best as possible. This also implies collecting rainwater which can be used for agricultural processes instead of just using precious tap water.

2) Disadvantages

- Implementation of permaculture can be costly in order to adjust agricultural processes and infrastructure in a way that the concept of permaculture can be really lived on a daily basis.
- Short-term losses vs. long-term benefits: permaculture is a long-term game instead of a short-term solution. Even though it makes sense to rely on long-term solutions, it may also lead to problems for many farmers since they have to invest significant money and have to wait an extensive period of time until they see the rewards.
- Farmers are not used to it.
- Skepticism regarding this new concept: In many poor countries all over the world, the local population is dependent on the yields of farmers in order to ensure their food supply, changing agricultural practices poses a great risk since if permaculture doesn't deliver sufficient crop yields.
- Unwanted bacteria and pests may spread: Since the concept of permaculture also forbids to use chemical pesticides, chances are that bacteria and pests can spread quite easily, which may lead to the loss of crop yields.
- Knowledge regarding permaculture is still rather limited: since permaculture is a rather new agricultural concept, farmers all over the world often lack the knowledge to change their agricultural processes so that they are in line with the principles of permaculture.

- May not be sustainable for mass production
- Permaculture involves plenty of work: permaculture can also be considered to be more time-intensive and many farmers may simply not want to make this time commitment due to fewer machines will be used in permaculture.
- May lead to unpleasant smell and can look quite messy: Since permaculture relies on compost and requires farmers to use our natural resources as efficient as possible, it also implies that nothing is wasted. In turn, farming in line with permaculture can look quite messy since plenty of organic materials will be around the property and those properties may rather look like an organic landfill instead of a tidy agricultural business.

References:

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<https://youmatter.world/en/definition/definitions-permaculture-definition/>

Watch to learn more: <https://www.youtube.com/watch?v=0mwRAf3z9ag>

For more information: <https://permaculture.org.uk>