



## Agro-Ecological Practices

Agro-ecological farming is an alternative to industrial monoculture farming systems. It is best practice for family farming as it is adapted to local conditions, is inexpensive, and is environmentally friendly. Agro-ecological farming uses the same principles as organic farming but is not regulated by a certified body.

The food produced using agro-ecological practices is free of artificial chemicals and GMOs, is healthy, and has balanced nutrients.

### ● 1: No synthetic fertilisers

Synthetic fertilisers kill some beneficial soil organisms, deplete soil fertility and damage soil structure. Synthetic fertilisers are expensive for a household and every year the amount needed increases. Farmers can instead use natural methods such as making compost.

### ● 2: No synthetic pesticides, insecticides or herbicides

No agro-chemicals, such as pesticides or herbicides, may be used in agro-ecological farming. Some of these cause sterility in humans. They create resistance to other pests. If wrongly used, agro-chemicals may kill livestock and humans as they are poisons. The containers these poisons are supplied in should be returned to the suppliers but this rarely happens. Instead, the containers are re-used in rural households without an awareness of the dangers posed.

### ● 3: No hybrids or GMOs

Agro-ecology allows no chemically treated seeds, hybrid seeds or GM seeds to be used. These are expensive seeds, especially the GM seeds which are patented and are not naturally bred. Hybrid and GM seeds cannot be kept and planted in the next season – they are, therefore, not an economical option to support subsistence farmers and poor communities. Only open-pollinated seed varieties are recommended as these are sustainable, naturally bred, easily adapt to local conditions, and can be seed banked and stored by family farmers for the next season.

### ● 4: Composting

Compost is a good substitute for artificial fertilisers if it is correctly made with all the necessary ingredients. Compost is “alive” so it is delicate and time consuming to make; it therefore should be used wisely during planting time using the correct application rates. The use of earthworms is also advisable when using compost as a plant food. Applying foliar feed preparations directly to the leaves of plants is an additional boost to compost.

**What you feed the soil, you feed the plants.  
What you feed the plants, you feed the consumers.**

## 5: Fertility beds

Fertility beds include trench gardens, and beds prepared through double digging and single digging. Thorough preparation of these beds is the main investment. Fertility beds serve as a reserve for plant nutrients and water, as water harvesting techniques are incorporated for underground water storage. If properly prepared, a farmer can use the same bed for more than 5 years without having to turn the soil. Fertility beds also help to clean the environment as they utilise waste from the yard and surroundings (like bones, greens, rusted iron tins, papers and cardboard).

## 6: Use of grey water

The collection of grey water (waste water from bath and kitchen) is important as our country is water-scarce. Grey water is cleaned using wood, coal, sand, ash and stones. It is then used in the garden by applying it on the ground near the plants – not directly on the plants. Dish washing water sometimes does not need to be cleaned first as it has surplus nutrients.

## 7: Mulching

Mulching is a “soil blanket”. All soils should be covered by dry grass. This is so important because it maintains soil moisture, suppresses weeds, and when decomposed it becomes plant food. Mulching also protects vegetables and fruits like pumpkins so that they are not directly on the soil. Mulch also acts against soil erosion.

## 8: Saving the seed of at least 14 traditional varieties

A process of proper seed banking should be followed. This involves seed collection, seed breeding, seed selection, seed harvesting, seed storage and seed multiplication. Proper seed collection and breeding will give better yields and good healthy seeds. This is important for the current generation of farmers and consumers as well as for future generations who will have better seed and food security. Cultural rituals are also observed in seed saving systems. Rituals build Ubuntu and keep the community together as they share the seeds.



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