



## Discover / REAP News-sheet for colleagues in Africa September 2019



### The climate crisis in Africa – what can we do?

We all know about the problems of coping with changes in weather patterns. Here are some suggestions for what can be done.

The whole philosophy and practice of agriculture needs to change! In general, do not plough deeply, be ready to try new crops, intercrop and look after the soil.

1. Grow less maize and fewer Phaseolus beans, except where they are known to always succeed.
2. Plant more indigenous and more drought resistant crops like sorghum, millet and pigeon pea. Even with these crops be careful! For example, while new varieties of these crops are being promoted, the older varieties often are much more drought resistant than those bred for uniformity. Tillering (that is the production of new shoots coming from the roots) is a very valuable characteristic of sorghum that seems to have been bred out of commercial varieties.

There are many nutritious dishes that have been developed in relation to changing tastes in addition to those made traditionally with sorghum, millet and pigeon pea.

3. Include new crops that are known to require little rainfall, for example grain amaranth.
4. Include more root crops such as sweet potatoes and cassava. They wait for the rain to come and the ground to be moist - then they grow. Make sure you also grow a variety of other crops to ensure you also have sources of protein, minerals and vitamins.
5. Develop relevant ways of processing crops not traditionally used as a staple on your own farm for use in what one can call real food rather than snacks, e.g. sweet potato flour.
6. Preserve your fruits and vegetables. Build a solar drier so you can dry vegetables, mangoes and other fruits to eat throughout the year.
7. Grow moringa and prepare moringa leaf powder. This can be stored easily. Moringa is fairly drought resistant. It may look as if it is dead in a dry period but with rain it sprouts again.



Drying moringa leaves in Kenya. A hot room with a roof of corrugated iron sheeting and a through draught. Before entering the room, one must remove the shoes.

8. Practice organic farming which builds the natural fertility of the soil. Avoid agricultural chemicals which lead to soil being dead and thus long-term soil fertility being destroyed. These chemicals sometimes cause illness, kill important insects and pollute groundwater.
9. Include tree crops on the farm which include fruit trees and moringa. They also make better use of rain whenever it falls.
10. Include leguminous trees in the farm in order to increase and maintain soil fertility, only cutting them when they become a nuisance. Choose trees that have several benefits.
11. Promote the use of energy efficient stoves that reduce firewood use.
12. Plant contour strips. Vetiver grass is particularly effective. If well planted it gives a very good barrier that not only holds the soil back, but also slows water run off so that the water penetrates the soil. And the water table rises. This makes the crops far more resilient to dry spells.
13. Keep the soil covered - always. Use green manure cover crops, such as jack beans or mucuna beans, which spread out over the ground, and use mulch on any areas that are still bare. Both cover crops and mulch protect the soil, provide organic matter and nutrients, conserve the moisture in the soil and increase percolation of water.
14. Plant and protect trees everywhere, especially on the hills and mountains and sources of water. They give shade, prevent soil erosion and provide timber and, sometimes, fruits.
15. Practice agroforestry, that means planting leguminous trees in your fields which give shade and naturally fertilise the soil.
16. Control roaming animals, so that they do not destroy your crops and young trees. In areas that are not cultivated and not subject to roaming animals, various trees begin to grow naturally without even having to be planted. If you control your own animals, then you can challenge others to do the same.
17. Grow as much of your own food as possible and help the community to be self-reliant in food, rather than transporting food from other districts.
18. In schools, churches and mosques teach about the importance of caring for God's creation, which means working hard on the land and enhancing and protecting the environment.
19. Campaign the government to plant trees, to protect existing forests, to reduce monocultures, to promote organic farming, and to strictly control mining operations to prevent environmental destruction.



20. Collect as much rainwater as possible when it falls. This tank helps the farmer to get greens for her family and to earn good money.

We wish you success in all these activities!

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