MY IDEAS ABOUT
THE PRE-CONDITIONS FOR ORGANIC FARMING
TO BECOME SUSTAINABLE AGRICULTURE

K. NARASANNA
Permaculture Co-ordinator
Deccan Development Society, Pastapur 502 220, Medak dist.

Introduction

Agriculture, to me, is not an isolated term; it goes together with many other processes that go on harmoniously in nature.

As we all know, there used to be a time when many grains and their seeds would just grow wildly in Nature - there for anyone to consume. Forests used to be plentiful suppliers of everything that man needed in terms of food. This was when man was nomadic. Once man settled down, the need for having everything that nature had to supply around him, within his reach, started. Crops and trees started to be grown around settlements. The isolation began here. Over years and years, what man needed and preferred started gaining importance - be it crop varieties or tree species. Other considerations never came into the scene.

But this was not meant to be. In this one-sided struggle, some species of flora and fauna got weakened and discarded. This interference with Nature was unlimited and thoughtless.

In the name of several revolutions, in terms of productivity and yield of varieties, the very basis of agriculture started to be destroyed.

Soil Fertility

Agriculture in historical times reminds one of places like Mesopotamia, Egypt, Sind, Greece, Rome, Libya and some south African countries. They all had once boasted of magnificent agricultural traditions. The main reason was nature's generosity in terms of fertile soils, water sources, good alluvium and organic matter deposits etc. What one should look into is the natural resource management systems adopted by these great civilisations. Ultimately, it is the mismanagement of these natural resources in an indiscriminate fashion that had led to the downfall of these civilisations. In their constant efforts to expand,
Greek and Roman Empires were supposed to have depleted their forests rapidly leading to their decline. Water resources were in turn affected too. And the cycle continued, obviously. The wars that they waged were not against neighboring empires but on Nature and the results are a great lesson, to be learnt from, even now.

Nature, which is supposed to be the life-giver to humanity is slowly but surely being killed in a myriad of ways. So where and how would modern life, with agriculture as its main sustenance, be regenerated? Nature NOT protected in its entirety - its soils and their fertility, its water resources, its plant resources - would always lead to problems in agriculture also. History tells us that no civilisations have survived without sustainable natural resources management practices - sustainable agriculture being a main component of such systems.

In fact it is an art understood and appreciated by only some - the art of symbiotic relationships of interdependence and independence between various components of agriculture. This includes understanding soil fertility and not just higher yields.

What Happened to Our Agriculture?

Constant undesirable human endeavour to 'conquer' nature has led to the discovery and creation of chemicals. Chemicals that man has created are not part of nature's regular cycle. Today, agriculture sports a different look - chemical - based agriculture. These chemicals do not fit well in Nature's picture. Their toxicity is spoiling the rest of the picture as well.

This is, fortunately for us, dawning on people slowly and this is the context for discussing organic farming.

What is Organic Farming?

Organic denotes all those components that are inter-related in Nature - crops, trees, plants, soils, water, renewable things, everything that goes back to nature, to become part of it again. Nature accepts everything that is organic. On the other hand, man's creations are not easily accommodated into Nature.

When one is talking about sustainable agriculture, one has to keep in mind those inputs which have a direct relationship with the crops that we grow - inputs that originate from nature itself. Organic elements originate from matter that has life. Agriculture utilising such elements is organic.

In the present situation, one has to encroach on other eco-systems for even 'organic farming'.
should be able to generate all its inputs and outputs within itself.

Is that all there is to
Organic Agriculture?

Can one define non-chemical based agriculture as organic? The answer is a definite NO to me. For me, organic agriculture is much, much more than this. In the following pages, there is an attempt to focus briefly on other related issues which I feel Organic Agriculture should encompass if it is to be defined as a sustainable system, and as subsistence farming:

Organic Farming is Traditional

Organic farming cannot be claimed to be a newly developed system. Farmers in this country and in many other places have traditionally practiced organic farming for centuries now.

Organic farming in turn helped the living and survival of numerous life forms - ones that are recognised as extinct or near-extinct now or ones that still have not received the notice of human beings. Organic farming meant that the micro-environment in a farmer's field had its own life forms - plant and animal; these life forms had their own cycle and structure which was made a WHOLE only when all the components were present.

In other words, organic farming would be a system that could be adopted easily by an existing eco-cultural system, with no major disruptions and with the utilisation of local resources only.

It is only in recent times that organic agriculture took a back seat for various reasons and led to the extinction of numerous plant and animal species and some valuable practices.

Organic Farming should not look at Yields alone but also at Replenishment of Resources, especially Soil Fertility

As long as agriculture looks only at yields, even non-chemical based agriculture is not sustainable. What is more important is looking at what is being taken away from the soil and the micro-environment with each agricultural cycle and replacing it. Unless this is done, yields even by organic farming cannot be sustained. And in reality, yield cannot be looked at in a narrow sense and defined as the grain produce; yield should include addition to soil fertility and all the by-products from the main crops.

Organic Farming should have an element of Replenishing Soil Fertility through Green Manure or Compost

The fertility in the soil that is utilised when a crop is raised is to be returned by putting in some green manure or composted matter into the soil. And as per Nature's Law of
Returns, if at least 10% of the produce is recycled back into the soil for fertility replenishment, we are on our way to developing sustainable systems. On the other hand, mere non-application of chemicals may not be enough to ensure soil fertility.

Allowing for the Replenishment Of the Flora and Fauna in the Micro-Environment as source of Organic Inputs

Organic farming should ensure that the micro-environment in the farm is not disturbed to the extent that the flora and fauna in that environment disappear. These are in fact great local sources of inputs for practicing organic agriculture. In this context, one could talk about animals and birds and insects in addition to crops and plants that directly or indirectly affect one another in a micro-environment. Once these are removed, even organic farming is not sustainable.

Organic Farming should also mean low dependency on External Inputs

Any sustainable system of organic agriculture should ensure that all the organic inputs are local and not imported from outside. These local sources include the main crop, the crop mix, the plant resources of the area and any other interrelated component affecting the farm system.

Organic Farming that has Mono-Crops cannot be Sustainable

A single species of crop, even if it is organically grown does not constitute sustainable farming to me. Within a farm, a diversity of crop species are needed to ensure that a variety of needs are met - not just of the people but of the environment itself - starting from the micro-organisms present in the soil. Monocropping, on the other hand, leads to a system which supports a select few and only for a short period of time. The soil which also needs a variety of nutrients to be part of it cannot be fertile when one crop takes away all the nutrients that it requires without an accompanying crop replacing it.

Organic Farming should cater to Local Needs first and not be Export-Oriented for it to be Sustainable

If agriculture does not take care of the needs of farmers, to ensure good livelihoods to them, even organic farming cannot be sustainable. If the farm is geared only to export products and not to cater to the essential requirements of the rural people it is bound to collapse some day.
Organic Farming that utilises modern agricultural tools and implements only is not sustainable

A recent trend has been to take up organic farming utilising a number of 'appropriate technology tools' replacing and discarding the traditional tools and implements as 'unscientific'. The range covers tractors, power tillers, dehusking machines, threshing machines and so on and so forth. In fact, an examination of these tools would reveal that these implements usually utilise non-renewable energy / techniques and contribute to pollution problems. Whereas, when one looks closely at the practices that went with traditional tools and implements, one would find that each one was created to suit local needs and conditions and farming environments. They were not standardised to make agriculture nearly uniform everywhere. Organic farming should also recognise that agriculture has to be very much location-specific for sustainability and this leads us to my next point.

Organic Farming should take into consideration the role of Animals in Sustainable Agriculture

The role of animals in organic farming cannot be over emphasised. There can never by any organic or sustainable agriculture without the integration of animals into the system. Animals are the interveners for recycling many of the products and agricultural residues, not needed by man into nutrition for plant life.

Organic Farming should not lend much importance to HYVs

High yielders, as opposed to traditional varieties, once again put the emphasis on Yield rather than on recycling components in a farm. Traditional varieties and the traditional farming practices that go with them ensure a crop mix that replaces soil fertility whereas high yielders / improved varieties demand inputs that are external and in return, deplete the system.

High yielders would require a brief reflection on the social aspects connected to it: who has access to the high yielders anyway? And who seems to benefit from it in the short run? Also, since high yielders are to be procured from the market and then supplied to the market, what is the probable effect on community relations in a rural setting? What would happen to the symbiotic relationships between human communities? And as we are aware, the long term negative effects from raising HYVs only would be ultimately borne by the marginalised sections, as usual.

Finally, Organic Farming for Whom and Why ???

Organic farming, according to me, can be sustainable only if it
adds to equity, social justice and harmonious ecological systems. Anything else done in the name of organic farming not taking into account the above perspectives cannot be sustainable.

For whom?: Organic farming has always been the backbone of the poor farmers with unproductive lands in many cases. For them, any other kind of agriculture would be suicidal. Their lands have to be nourished and treated with care for any output at all. This, they realise and have developed systems of integrating various plant and crop species that grow locally, the local livestock, the manure and compost from these sources.... everything is recycled back and forth. Nothing is considered undesirable or useless and similarly, high yields are not the only objective. Adequate supply of food grains and that too, a variety of them in the form of millets, cereals and pulses is secured through organic farming by these farmers. In other words, food security is taken care of in a sustainable fashion. This is related to a point discussed earlier about export-oriented organic agriculture.

This kind of organic farming, which to me is its true form, also ensures good health to the people and the soil. A balance in nutrition is ensured, at the same time eliminating any kind of toxicity in the crops grown. Good health is thus secured, especially by the marginalised, at no extra expenditure at all.

Most importantly, sustainable organic farming with the above components does not disturb and endanger other eco-systems. In other words, such a system would not attempt to go against nature but be in harmony with it.