

Questions and Answers on IFOAM's stance on the African Fertilizer Summit

What is OA?

Organic agriculture is a holistic production management system, which enhances agro-ecosystem health, utilizing both traditional and scientific knowledge. Organic agricultural systems rely on ecosystem management rather than external agricultural inputs.

How can you be so critical about the Africa Fertilizer Summit - are you denying there is hunger?

IFOAM by no means underestimates the current problems in agriculture on the African Continent. However the problems cannot be solved with the same kind of thinking that created them.

Over-exploitation of land and the introduction of chemical fertilizers and pesticides have stimulated a production system that increasingly tries to be independent of natural regulating processes and local resources, and that is heavily dependent on nonrenewable resources. As natural cycles are broken, this leads to increases in the severity of pests and disease outbreaks and greater problems with nutrient management. To solve these problems even more pesticides and more chemical fertilizers have to be used and a vicious cycle is established.

And although low soil fertility is a cause of Africa's food insecurity, it is certainly not the only cause. Social and economic determinants are at least as important. They, however, will not be changed by using more fertilizer! The preoccupation with productivity per hectare ignores the increasing evidence that it is not supply factors, such as productivity per hectare, but demand factors, such as market opportunities, that determine agricultural development outcomes in Africa.

But there is lack of food, isn't there?

There is no lack of food on a global scale, yet millions of people are still starving. Within many countries food production is

sufficient to meet national needs yet people are still starving or under-nourished. It is apparent that sufficient food supply and production, while an important precondition for providing sufficient food for all does not guarantee it.

What is more important is who produces the food, who has access to the resources, the technology and knowledge to produce it, and who has the purchasing power to acquire it.

As the Nobel Prize winning economist Amartya Sen (1982) notes
"Starvation is the characteristics of some people not having enough food to eat. It is not the characteristic of there not being enough food to eat."

In many cases food production fails to deliver economic returns. The lack of a developed food market gives farmers no incentive to increase production. So land is even left barren!

The causes of starvation are plenty, but only seldom are they related to the rate of agricultural productivity. Rather, developing countries are highly in debt and must therefore export food, feed and other agricultural products (so called "cash crops") to the wealthy countries of the northern hemisphere in order to generate income. And enormous amounts of these foodstuffs are fed to animals. This often occurs despite the fact that much of the population of the country in question goes hungry. In turn, the local population often does not have the money to buy the foods that are usually available in abundance.

So what are other factors?

Other factors can include a lack of labor or healthy labor, bad governance, lack of distribution capacity, poor infrastructure, lack of good storage capacities and policies that discourage or undermine food production. Global trade relations and rules, international and national policies, structural adjustments and trade concentration affect food security in a number of ways. The inequitable terms of competition between producers in industrial countries and those in

developing countries severely constrains production in developing countries. The most direct effects are caused by developed countries 'dumping' their agricultural surpluses in developing countries. When sold on the world market at below production cost (because of production and export subsidies), these surpluses depress local prices, thereby lowering production.

But how does OA contribute to social and economic aspects?

Organic Agriculture puts the farmers, instead of external inputs, at the center of the farming strategy, restoring a decision-making role to local communities, guaranteeing their right to control their own resources and engaging their active participation in a value added food chain. Organic agriculture is knowledge intensive, rather than capital and resource-intensive and builds on traditional knowledge. Farmers do not need to get a loan to purchase their input.

What do you think of UN Secretary General Kofi Annan's call for African Green Revolution?

In our understanding the Green Revolution should be really green and addressing all aspects of sustainability. Mineral fertilizers are made with oil, a depleting and cost increasing source. The manufacture of N fertilizer is the single main cause of energy use in non-organic farming. The production of N fertilizer is a major source of greenhouse gas emissions as fertilizer is produced from fossil fuels (usually natural gas) and the process is energy intensive and releases additional greenhouse gases.

A large proportion of Africa's food producing areas consists of farming characterized by (very) small family farms, that have (very) little access to inputs, capital and markets, and that are dependent on rainfall that is so erratic that it is too risky to use expensive inputs such as fertilizers, hybrid or genetically modified plant material, or pesticides. However the improved varieties can realize their full yield potential only with a significant increase in the use of mineral fertilizers, which is simply out of reach for most of the farmers!

More than half of the world's food is produced by women, and in rural areas in developing countries as much as 80 percent. Yet women have little access to land, credit, training and education. In five African countries Kenya, Malawi, Sierra Leone, Zambia and Zimbabwe women receive less than 10 percent of the credit awarded to smallholder farmers and just 1 percent of agricultural credit overall.

These aspects of sustainability are not addressed or even done unjust by a green revolution based on chemical fertilizers!

But most small African farmers are already 'de facto' organic farmers as they don't use fertilizers and pesticides, yet their situation is not any better. So there is a good reason for the fertilizer summit!?

Organic Agriculture is much more than 'not using external inputs'. Organic Farming techniques based on scientific and traditional knowledge aim to improve the condition and structure of the soil through crop rotation, green and animal manure; to work with biodiversity and landscape; to choose optimal breeds (in stead of maximal, but risky yields); to fit in the local environment and circumstance - all on a human scale.

Challenges are to spread this kind of thinking, e.g. through farmers' training groups, so farmers can work on their own solution (in stead of a one-size-fits-all-fertilizer).

Organic farming is not 'backward' but a continuous learning. There is still much research to be done to improve techniques and to learn more on the ecological cycles with which the organic farmer can cooperate.

Does Organic Agriculture use fertilizers?

Certainly! In organic farming natural substances are allowed to boost fertility if there is an acute need. However most important is building and protecting the soil. Where mineral fertilizers feed plants, within organic agriculture organic fertilizers, such as plant

residues or livestock manure, feed the soil! With a stable soil ecosystem, and good organic matter, the system is less vulnerable, has better water retention and can deal with less ideal situations such as drought.

But organic farming is not efficient.

It is claimed that organic farming is less efficient and lower yielding than farming with mineral fertilizers. However it is not clear on what these claims are based. It might depend on what you call 'efficient'. To be fair, one should include more aspect to get the complete picture: organic agricultural systems are efficient in water use, fossil energy use, biodiversity conservation and clean air production. These 'products' in return contribute to a stable agro ecological production environment.

Furthermore, when simply comparing agricultural yields, the fact that the excessive use of synthetic fertilizers and agrochemicals increase the financial dependence of farmers is often overlooked. Above all, this poses a problem to poor, small farmers in developing countries. The intensive application of these hazardous substances causes long-term destruction to the environment upon which agriculture as a whole is based.

Yet yield comparisons can be misleading, for technical as well as social reasons. In the first place intensive agriculture often focuses upon (one variety of) one crop, whereas organic systems tend to be more diverse - and should thus be evaluated on the basis of total farm productivity, rather than yields of single crops. Farmers may have a preference for multi-functional crops, for example, rice varieties that yield high quality straw (for livestock fodder) as well as grain.

Secondly resource poor farmers often adopt risk aversion strategies that, rather than seek to maximize yields in good years, prioritize insuring against complete crop failure in bad years (i.e. those of drought, disease or pest outbreaks). Thus in terms of food security

for the poorest it may be important to think of yields in bad years, when the survival of farm families and rural communities is most at stake.

Finally, yields only play a part in determining farmers' incomes. The expenses incurred in production and the prices that they receive for their produce are more important factors.

So in the overall picture Organic Agriculture is efficient in the long term. It is this net picture that determines eventually whether a farmer still sees the benefit of farming, or to put it more extreme: can afford to be farmer at all.

As organic agriculture is more extensive it needs more land. Must this happen at the cost of wildlife?

It is often claimed that so-called inefficient types of agriculture, such as organic farming, require more land, and therefore destroy more nature than 'efficient' conventional agriculture. However the bigger systemic picture is undervalued when putting such a claim. We cannot divide the world into land for agriculture and land for nature.

Conventional agriculture has negative spin of on our common environment, of which wild life is a part as well.

Organic Agriculture works on ecological balances and the long term circumstances under which a farmer can produce. From the perspective of eco-services management, organic agriculture has advantages over conventional agriculture.

What is wrong with chemical fertilizers?

When synthetic fertilizers replace more natural ways of nutrient management - such as crop rotation, recycling of organic matter and the integration of animals and crop production - soil organic matter declines. This makes the soil more vulnerable to physical erosion by wind or water, diminishes the water retention capacity and reduces

the potential for nutrient uptake. Inappropriate tillage and cultivation practices can exacerbate soil erosion problems.

By relying on external inputs like chemical fertilizers and pesticides, conditions in conventional agriculture are standardized; so, standardized crops are produced, and so, the genetic base of food crops is narrowed down. This is not only limiting the variety of food, it makes these agro-systems even more vulnerable to pests and diseases and farmers more dependant on external inputs.

So Organic Agriculture serves more than one goal?

Evaluating the benefits and the limitations of organic agriculture is complex. The impact of a conversion to organic practices will greatly depend on the starting point of the farmer and farming community, their skills and the resources available to them. However a number of key relevant potentials can be identified.

Organic agriculture can increase productivity, especially in situations where farmers are vulnerable to food shortages.

Organic agriculture can increase income and/or returns to labor. This can be achieved through higher yields, higher (premium) prices, lower costs (for inputs) or combinations of these three.

The diversification of production inherent in organic agriculture reduces the risk of crop failure and attendant economic and food security problems. This parallels strongly with the risk aversion strategies adopted by low income farming households.

Organic agriculture produces safe food and a more varied and nutritious diet.

Organic agriculture eliminates the very real risks associated with exposure to pesticides and other toxic chemicals.

Organic agriculture has a major role to play in assisting with resource management, such as reducing water demand and run-off, soil erosion and in maintaining and enhancing biodiversity.

Organic agriculture makes farmers and consumers more aware of the need for sustainable production and consumption, of the importance of clean and safe food and of the need to protect the environment.

Organic agriculture brings clear benefits to women in agricultural communities, to other marginalized groups, as well as offering new employment opportunities for the landless poor.

Organic agriculture recognizes the value of traditional and indigenous knowledge and integrates this in its production methods, thereby increasing social capacity and self-value.

Organic agriculture is sustainable in the long term. It enhances environmental resilience against, for example, drought, flooding or other climatic catastrophes. There are also several examples where it has been used to bring degraded and abandoned land back into production.

Organic agriculture has a clear role to play in helping meet a range of global environmental policy objectives, including those relating to combating desertification, to maintaining biodiversity and offsetting the consequences of global warming (through carbon sequestration).

One can conclude that the benefits of organic farming are synergistic!