

Sustainable agriculture in the news: International study stresses role of farmers

The recent global food crisis shows that agro-technology and markets alone cannot reduce hunger. A ground-breaking three-year study recently concluded that the agriculture sector should use the know-how of smallholder farmers better.

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Global agriculture is not delivering all it should. Agricultural production has increased, but at an environmental and social cost. All over the world, some 800 million people are still undernourished, most of them in rural areas. At the same time, a similar number of people globally are overweight, with obesity rates on the increase. Currently, 1.9 billion hectares of land (three times the size of India!) is affected by significant land degradation. Agriculture today uses about 70 percent of the world's freshwater, nutrient run-off from farmers' fields causes pollution of all major rivers in the world, and agricultural production emits gases contributing to climate change. Food export bans and speculation disturb supplies to the poor in importing countries, even if production is sufficient.

Landmark report

What kind of agricultural knowledge, science and technology do we need to solve these problems? Over the last three years UN organisations, the World Bank and many governments supported 400 experts from all over the world to conduct a massive study: the International Assessment of Agricultural Knowledge, Science and Technology for Development (or IAASTD, see <http://www.agassessment.org> for more details). They delivered their report in April in Johannesburg, South Africa, which happened to coincide with the sudden doubling of world food prices. The broad conclusion was that agricultural knowledge and technology need drastic changes: "business as usual is not an option". The sad reality is that the countless poor and the vast amount of degraded agricultural land are so far not major drivers for change in agriculture and science. The IAASTD study suggests that three transitions would help move practice in the desired direction.

First: Science must help farmers to use resources more efficiently. Soils, energy, biodiversity, fertilizers and pesticides need to be used wisely. Farming must adapt to and contribute to counteracting climate change. Science must complement local knowledge and support sustainable farming with a "best mix" of economic, social and environmental outcomes.

Second: Issues like subsidies, markets, access to land and know-how must take the necessities of smallholder farmers into account. For example, most smallholder farmers cannot respond; that benefit



Photo: Jorge Chavez-Tatur

Members of the Mkombozi farmers group in Mkomo, Mtwara region, Tanzania. Their knowledge and expertise, like that of all small holder farmers around the world, is crucial in ensuring global food security.

the rich more. Intellectual property regulation hampers smallholders' seed systems that have become "illegal" as industries take out patents on seeds as well as other living organisms.

Third: The true agricultural production costs should show in prices. Farmers invest in maintaining soil quality or biodiversity but get no rewards from the market, while it is the world community's interest to keep soils productive, and to make sure that water from agricultural land is drinkable, and does not run off in the shape of floods.

This assessment highlights the contribution of strong collaboration between researchers, formal science, and the knowledge, skills and expertise of small farmers in moving sustainable agriculture forward. It provides robust evidence that public and private goods can be secured only by a new balance among environmental, economic and social interests. And importantly, it emphasises the key role of small farmers in providing global food security.

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