

DISCUSSION: THE WAY FORWARD FOR SMALL HOLDER FARMERS

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I. GENERAL INFORMATION

Duration:	15.01 – 22.02.2008
Facilitator:	OP Rupela and Subhash Mehta
Number of participants:	24
Number of Contributions:	33

II. INTRODUCTION OF THE TOPIC

Dear all,

I am Principal Scientist (Microbiology), working with ICRISAT for the past about 32 years. For the past ten years, focus of my research is small-holder farmer. It involves strategies/methods for on-farm generation of inputs, use of locally available low-cost and biological options of crop production and protection, and recycling of plant biomass.

About 80% farmers in developing world, including India, have small farm holdings (as per 1991 census of India - 74% farmers in 1991 owned <1.4 to <2.4 ha and properties would have been further divided), But policy makers world-over are spin doctoring that small farm holders are not sustainable and that we need to find alternate livelihoods for them. On the

contrary some NGO's and innovative farmers have generated technologies and evidences indicating that carrying capacity of a given land can be enhanced significantly such that a family of five has been claimed to make a living on less than half ha area. This, however, needs inputs of assured water, knowledge, labor etc.

I would like to learn your opinion on **the reasons why condition of small farm holders has been getting worse year after year over the past about 30 years? Consequently, what is the way forward for small holder farmers and what are the implications, particularly for policy-making?**

Based on our research and experiences, we would argue that a country concerned/interested in helping its small-holder farmers needs to take bold steps to nurture its agricultural system. Nine following suggestions should help:

1. Prepare a strategic road map for a farmer-empowering research and development program that fosters agricultural production based on good agricultural practices following the most successful farming systems of each area. Disadvantaged and the rain fed areas should be the first for these development programs.
2. Progressively, reduce all so-called farmer targeted funds given as subsidy in some countries to agro-input producers such as of synthetic fertilizers, bio fertilizers, bio pesticides and synthetic pesticides. At the same time no money should be given directly to farmers as subsidy, because this will perpetuate farmers' problems, as noted in some countries. Instead, funds should be diverted to farmers through the programs for development that harness the intervention, staffed by professionals, to take all the risks and responsibilities, leaving farmers to farm and on farm activities.
3. As an important policy initiative, financial support (direct or indirect) to the input-based crop production and protection system must be reduced step-wise and finally withdrawn. The companies (including those where government is involved) engaged in their production should spend their own resources for promoting the type of agriculture that is based on external inputs, not use the public sector system, as is the practice now, to market the products. Money saved from these programs be spent on new programs aimed at training farmers for on-farm generation of input to meet needs for crop nutrients (e.g. generation of plant biomass on farm boundaries) and crop protectants (e.g. botanicals)
4. Credits (essentially needed to buy the external inputs) given to farmers in some countries e.g. India for input-based farming is a lure for receivers to use the money elsewhere. In the GAP-based agriculture, inputs can be generated on-farm. Therefore ideally, government should scrap the credit policy for farmers all together. But if continued it should be for enhancing local generation of biological or microbiological inputs and for ensuring food-security locally, such as for buying milk cows and buffaloes or even dry cattle, sheep and goats as they play an important role in natural resource based agriculture focussed on local farming systems.
5. Human Resource Development – whole agricultural research, extension and education system and its linkages with agricultural communities needs a re-look. Agricultural Universities presently having role in agricultural education, research and extension, should have a major focus on (a) GAP as relevant to small-farm holdings, (b) low-cost and locally available natural resources and their recycling to generate farmer-empowering agro-technologies, (c) articulate science to traditional knowledge of farmers. Basic research is very important, but be concentrated in selected well equipped and adequately-funded labs/institutes.
6. Crop development component is very important. But its focus should be to empower farmers. Eventually the seed should be available to farmers at affordable cost, preferably produced on farm. Rural seed-bank concept has been successfully used at some locations in India and in other countries.

7. Setting-up a mechanism of fullest support to the intervention, e.g., Producer Company (PC) concept. PC as an idea has been in use in various forms by some farmer groups in India and as small and medium enterprises (SME) in some other countries. The intention is that the government facilitates it through funding the infra-structural needs under the existing (modified where needed) company laws. Focus here is to make farmers as stakeholders to the end and participants in their own produce/products.

8. Extension – needs a change in focus from the present input-based to knowledge-based diversification involving local predominant farming system. Presently, the technology delivery system as established in the 1960's in countries such as India, has totally broken down. This be refurbished to link to the concept of PC. Also, the technology of crop production and protection using natural resources is presently practiced largely by some farmers supported by NGOs, agencies and companies promoting organic farming principles and GAP. These be given an important role to scale up these technologies.

9. All government programs aimed at nutritional and social security of vulnerable and captive groups (e.g. schools), should be linked to the PC concept such that the PC could readily sell their products to these groups.

Overall, it seems feasible to grow crops without or minimal purchased inputs in several regions. Crops do need nutrients to grow and protectants to save them from insect-pests and diseases. Most of these can be produced in-situ on-farm. What is needed is an important change to decide in favour of developing agro-technologies that would empower farmers, using inputs produced on farm. Use of several of the crop protection products developed based on traditional knowledge of farmers can be promoted through rural enterprises, the PCs. But acceptance and scaling up of these products and other eco-friendly crop production options is the biggest challenge. This may be addressed better by linking the uptake of these technologies to livelihoods of the farmers. The proposed model is expected to do the job and possibly double their 'Purchasing Power'.

We have contributed some papers addressing the issue of small holder farmers to the Forum site as background papers for the topic:

- Frequently asked questions on “Farmers’ Producer Company (PC)” an Institutional PC concept http://km.fao.org/fileadmin/user_upload/fsn/docs/Microsoft%20Word%20-%20FAQ-PC%206Mar2k7.pdf
- Is high yield possible with biological approaches? http://km.fao.org/fileadmin/user_upload/fsn/docs/Microsoft%20Word%20-%20high%20yield%20organic%20farm.pdf
- Comparing Conventional and Organic Farming Crop Production Systems: Inputs, Minimal Treatments and Data Needs http://km.fao.org/fsn/resources/fsn_viewresdet.html?no_cache=1&r=327&nocache=1
- Lessons from Non-chemical Input Treatments Based on Scientific and Traditional Knowledge in a Long-term Experiment http://km.fao.org/fileadmin/user_upload/fsn/docs/Lessons%20learnt%20AAHF2K5.pdf
- A new index to assess soil quality and sustainability of wheat-based cropping systems http://km.fao.org/fileadmin/user_upload/fsn/docs/Kang%20et%20al2k5BiolFertSoils.pdf
- Evaluation of Crop Production Systems Based on Locally Available Biological Inputs http://km.fao.org/fileadmin/user_upload/fsn/docs/biological%20approach%20chapter35.pdf

Keeping the small farm holder in mind may be the best way to conclude this debate.

With best wishes,

OP Rupela

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Coordinator, Learning Systems Unit
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Andhra Pradesh, India
and
Subhash Mehta,
Devarao Shivaram Trust, Bangalore, India

(ICRISAT is one of the Future Harvest Centers supported by CGIAR. Opinions expressed here are of OP Rupela and not necessarily of ICRISAT)

III. LIST OF CONTRIBUTIONS

Contribution by Professor George Kent, Department of Political Science, University of Hawai'i, USA

Op Rupela and Subhash Mehta ask why the conditions of small farmers get worse year after year. Their work focuses on improvement of **on-farm technologies**. As a political scientist, I have a different kind of perspective. **My focus is on the power relationships between small farmers and other agents in their contexts with whom they must deal**, agents such as landowners, creditors, suppliers of their inputs, and purchasers of their products.

Typically, those who focus on technology tend to assume that the external socio-economic environment remains more or less fixed. Thus they assume that if farmers increase their outputs per unit input, they will be able to sell more of their products, increase their incomes proportionately, and increase their quality of life proportionately.

Unfortunately, many find they work harder and harder, but remain stuck in the same place. The fundamental reason is that **as small farmers they have little bargaining power**. They are price takers, not price makers. **As their productivity increases, the prices they receive for each unit is likely to go down**. The buyers of their products (the middlemen, the price makers) tend to control the rates of return to farmers so that they are just high enough to keep the farmers working, but low enough to maximize the profits to the buyers. Similarly, landlords will squeeze the farmers as much as they can, and so will the suppliers of inputs to the farmers.

The consequences of the low bargaining power of small farmers can be seen by examining commodities that are traded on the world market, such wheat or rice or sugar. The mythology says that prices for such commodities ought to be uniform across the world, apart from shipping and handling costs. By that reasoning, a producer of a kilogram of a particular type and quality of rice, for example, ought to be paid exactly the same for it anywhere in the world, with allowances made for actual shipping and handling costs. Smallholders should get the same unit price as large holders. However, where the data can be collected, **I hypothesize that we would find that poorer producers are paid much less than richer producers**. That is, I believe they are paid much less per unit of the same product. And **I believe this occurs very systematically, throughout the world**. [Years ago I demonstrated this pattern in fisheries, in "The Industrialization of Fisheries," Peasant Studies, Vol. 13, No. 2 (Winter 1986), pp. 133-142. <http://www2.hawaii.edu/~kent/The%20Industrialization%20of%20Fisheries.pdf>

Why don't poor people benefit from having lower labours costs? In fact they are punished for it, by being paid less for the fruits of their labour.

I have described this dynamic in the following terms:

“A great deal of poverty results from socio-economic development patterns which in most of the poorer nations have been characterized by a **high degree of concentration of power, wealth and incomes in the hands of relatively small elites** of national or foreign individuals or groups.

What causes this concentration? The ordinary, normal working of the market system creates wealth, but it also leads to poverty, and thus to concentration and to steadily widening gaps. The way in which the market system concentrates wealth and power in the hands of some and impoverishes others is very straightforward. The elementary transaction of the market system is the bargain, the negotiated exchange. One's bargaining strength depends on the quality of one's alternatives. Some people (or companies, or nations) are stronger than others because they have better options.

Those who have greater bargaining strength tend to gain more out of each transaction than those who have lesser bargaining strength. Thus, over repeated transactions, stronger parties systematically enlarge their advantages over weaker parties. Bargainers do not move to an equilibrium at which the benefits are equally distributed, but instead move apart, with the gap between them steadily widening. Asymmetrical exchange feeds on itself, making the situation more and more asymmetrical.”

(George Kent, *Children in the International Political Economy*, Macmillan/St. Martin's Press, 1995, pp. 18-19)

Small farmers are on the wrong end of that dynamic, destined to **remain marginalized** by the play of the dominant social, economic, and political forces.

Op Rupela and Subhash Mehta do not agree with policy makers who say that small farm holders are not sustainable and there is a need to find alternative livelihoods for them. **Why not develop alternatives, on and off the farm, and let the individuals choose?** In China and many other places, many poor people are leaving subsistence farming and going into manufacturing. In India, many people are now moving into service industries in various ways. If some people leave farming and earn substantial amounts of money, they will then have more money to spend on the products of those farmers who remain. Increasing the diversity of opportunities can only help. Those who are now small farmers need to find ways to increase their relative bargaining power whether it is from within or outside farming.

Aloha, George Kent

Professor George Kent
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USA

Forthcoming book:

Global Obligations for the Right To Food. Lanham, Maryland: Rowman & Littlefield

Contribution by Mr Alberto Zezza, Economist Agricultural Development Economics Division (ESA), FAO

I think the topic raised by Subash Mehta is extremely interesting.

I would just like to add a word of caution regarding the initial, provocative statement made in the initial post in this thread according to which ***"the [...] condition of small farm holders has been getting worse year after year over the past about 30 years"***.

I think this statement needs several qualifications in terms of what **'worse'** means, which smallholder farmers have been doing worse where (I believe many have thrived), and provide supportive evidence for the statements made.

While such blanket statements are useful as rhetorical tools to make a point and spark a discussion, I would like to see the ensuing discussion substantiated with more hard facts and greater nuances.

This is not only a matter of form or appearance, but also of substance. If all smallholders had done badly over the past 30 years everywhere, I would not see much scope for us discussing any of these with the view to proposing corrective measures. I think it is precisely the fact that **there are success story (where success may even mean getting out of farming) to learn from that makes the discussion worthwhile**. I would encourage forum participants to bring this nuances and evidence to the fore as I think that will add depth to the discussion.

Regards to all,

Alberto Zezza

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Contribution by Carol Kayira, Action AidInternational, Malawi

Related to the topic below, while we are discussing the way forward for smallholder farmers, **majority of small holder farmers are women**, and recent studies have shown that only 5% has access to extension services, even less have land ownership and access to other resources, **what's the way forward to uplift these women?**

Will contribute more when the discussion starts,

Regards

Carol

Contribution by Ms Anna Snider, Cornell Cooperative Extension, USA

Hello,

I would be curious to hear the forum's opinion on the article that was recently in the New York Times dealing with the success of fertilizer subsidies in Malawi, as it seems to contradict point number 2.

The article can be found at
http://www.nytimes.com/2007/12/02/world/africa/02malawi.html?incamp=article_popular

Thank you,

Anna Snider

Contribution by Professor Eltighani Elamin Agricultural Economics & Policy Research Center, Sudan

Dear all,

I believe the problem of the smallholder is not the per- se lack of credit, it is rather a concern of risk both at the farm and market levels. Risk analysis, is always deliberately overlooked when modelling smallholder agriculture, sometimes because of lack of appreciations, but, in most case due to the difficulty of incorporating risk and probability factors in the farm household models. The

Policy, Environment and Poverty (PeP) programme sponsored by the IDRC of Canada is doing a pretty good attempt of incorporating the risk factors in rural livelihoods.

Thanks

Professor Eltighani Elamin
Agricultural Economics & Policy Research Center

Contribution by Professor Ignatius Onimawo, University of Agriculture, Nigeria

Dear Subhash,

I want to say that I agree with most of the points raised on small holder farmers but I do not agree with point no.4 where it was suggested incentives should be withdrawn from farmers for fear of misuse of such credit. In Nigeria such credit extended to farmers had greatly improved farm yield and productivity. I think the **key lies in organizing the farmers into small cooperative societies where proper monitoring can be carried out.**

Prof. Ignatius Onimawo

Contribution by Pradip Kumar Das

There have been a number of suggestions on improving the situation of Small Farmers. Some of them must have been useful. But according to me there can not be a single solution for the entire world. The suggestions should be, therefore, in-country or region-specific. This is true for India too.

From my experience of working for small and marginal farmers with < 2 ha of land, I have come to the conclusion that the **small implements are not any good for economic cultivation.** Their owning at individual level is costly. Their manufacturing is also not profitable. Industries are not interested to manufacture small implements for little margin of profit and high marketing effort that does not commensurate with profit. Although the number of land holdings is three-fourth of the total, yet the demand for small implements in India is very low. There are nearly 50 thousand or so small fabricators of agril implements but most of them are busy in fabricating tractor and power operated implements and machines for reason of reasonable profit. Several scores of manufacturers manufacture small hand tools like sickles, khurpi, rakes, spades, secateurs, etc. of good quality at low cost for their volume of production is very high to justify mass production. This brings down cost of production.

The alternative to small farmers is **doing their field operations through custom hiring.** This saves the time of farmers, their anxiety, capital to buy small implements, quick return from harvested crops and sufficient time left with them for alternative spare-utilisation to make second earnings for their better living. The alternative spare-time jobs for small farmers are primary processing of food grains and oil-seeds and cottage-level making of papad, pickles and many fast food items properly packaged. The list is large. **There is provision of micro-financing through financial institutions and own savings to operate on SELF-HELP GROUP pattern.**

Conclusion: Small farming in all cases is **not enough for living and improving lot. Small farming may be made fast, time-saving and profitable through custom-hiring, contract labour and contract farming. The spare time utilisation is to be done through primary processing of food grains and oil seeds as well as cottage level preparation of fast and daily use food items.**

Regards,

Pradip Kumar Das

Contribution by the Facilitator OP Rupela, Principal Scientist (Microbiology) & Coordinator, Learning Systems Unit - ICRISAT

I would like to share news item (below) relayed on 22 Jan 2008 on a very popular and creditable TV channel in India with participants of the debate on "The way forward for small-holder farmers".

This news is the result of about a decade of hard work of an NGO [name: Centre for Sustainable Agriculture (CSA) – more information on their website: www.csa-india.org] based in Hyderabad India. Their work amply demonstrates that **cost of production can be greatly reduced and health of farmers can be enhanced greatly** if (a) **scientists focus on farmer-empowering agro-technologies** (farmers in the reported villages do not use synthetic pesticides but do use locally available options (largely botanicals and bio-option eg. NPV) of crop protection, and (b) if **governments provide a farmer-friendly policy framework** (in this case facilitated for scale up by SERP [(Society for Elimination of Rural Poverty) of the Government of Andhra Pradesh, India.

Best regards,

OP Rupela
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Andhra Pradesh, India

Uma Sudhir, Tuesday, January 22, 2008 (Vizianagaram)

50 pesticide free villages and 7 organic villages in Andhra Pradesh

A quiet revolution led by women is taking place in the farmer suicide heartland of Andhra Pradesh. Once notorious for highest pesticide use, some 50 villages have declared themselves pesticide-free and seven fully organic villages have emerged.

This is part of the largest ecological farming programme in the world, to show there is hope in agriculture without chemicals, indebtedness and suicide.

There is pride and confidence as Ramulamma shares experiences on how the women of Vizianagaram managed to turn their villages pesticide-free. She says not just productivity and soil quality; even their quality of life has improved tremendously.

"Soil quality has improved, so has productivity. The food cooked from this is more tasty and healthy. We don't fall sick, so we spend less and earn more. Thus, farmer suicides have been reduced," said Ramulamma, farmer.

Ramulamma is part of what has emerged as the largest programme in the world on ecological farming. It started three years ago with villages like Enabavi declaring itself chemical-free in Warangal district of Andhra Pradesh, notorious as the heartland of heavy pesticide use and farmer suicides.

From 25000 acres in 450 villages, the scaling up has been rapid to seven lakh acres in 1650 villages.

"At a time when many people are saying agriculture is no longer viable, these people are finding that to get out of the crisis, agriculture is perhaps the best option but the way they do agriculture has to change. Once they do ecological farming, they find their livelihoods are improving," said GV Ramanjaneyulu, Centre for Sustainable Agriculture.

What's interesting is that women through self-help groups are leading the revolution.

Contribution by OP Rupela (Facilitator) & Subhash Mehta (Devarao Shivaram Trust, Bangalore, India)

Some views and information shared by Prof. Kent were new for us. Thanks.

When we talk of small farm holders in the developing world we are talking about half the world's population, most of whom are women, largely illiterate, have low access to need based resources and extension services, are cash-poor, suffer malnutrition, etc. Most Governments and development agencies have programmes, schemes, funds, etc, meant for these communities, but the **delivery system** in most cases has failed them. Our paper, previously circulated on FSN Forum and now with some small changes, suggests an intervention - producer company (PC) concept (see

http://km.fao.org/fsn/resources/fsn_viewresdet.html?no_cache=1&r=334&nocache=1). As per this suggestion **local communities may organize themselves as a business group** -- of, for and by farmers but staffed by professionals, facilitated by interested government agencies. The PC should take over the risks and responsibilities of the company and let farmer stay with on farm activities (their expert area), to ensure a positive 'cash to cash cycle', where members (farmers and the professionals) are stakeholders to the end.

The professionals staffing the PC will find ways to not only **increase the bargaining power** but also **facilitate value addition on post harvest** and locally, possibly **doubling 'purchasing power'** by putting in place plans to produce and meet the needs of the local communities and at farm-gate prices.

With best regards,

OP Rupela & Subhash Mehta

Contribution by Shaikh Tanveer Hossain Faculty of Agriculture, Ehime University - Japan and Senior Scientific Officer, Bangladesh Rice Research Institute Gazipur - Bangladesh

I would like to share my experience on this issue in Bangladesh context. "**Integrated Rice-Duck Farming for Resource-Poor Farm Households**" project has been first initiated by me in Bangladesh on 2001 under financial support of IRRI (PETRRA)-DFID. The project was jointly functioned by the Bangladesh Rice Research Institute (BRRRI) and two NGOs, Friends in Village Development Bangladesh (FIVDB) and Bangladesh Development Society (BDS). I learned this technology from a Japanese farmer in 1998.

Japan and some other Asian countries like Vietnam, China, Taiwan, Korea, and Indonesia are using rice –duck culture as one of the means of organic farming. In Japan this methods is popularly known as 'Aigamo rice cultivation'. The integration of rice cultivation with crossbred duck farming for mutual benefit to generate more income for the small entrepreneurs. Moreover, the farmers can get two things from the same piece of land that is rice and meat. During cultivation of rice, weeds and insects are regarded as menaces that take away nutrients from the crop fields. However, the situation has change if ducks can be reared there whereby the weeds and insects that are considered evil has become food for the duck and the faeces/droppings of these ducks are provided nutrient to rice plants.

Some of the **key benefits of rice-duck culture** are highlighted as below:

- **Reduce cost on fertilizers and agro-chemicals:** The cost on chemicals like fertilizers, insecticides and herbicides etc has minimized due to the positive benefits of ducks. The products obtained through organic farming have carried more value in the market.
- **Reduce cost of labour:** By releasing crossbred ducks in the paddy fields the development of weeds has controlled and then there are reduced need for labour for this purpose.
- **Increase the yield of paddy:** farmers are able to get 20-30% more yield of paddy.
- **Conservation of natural environment:** The production system conserves the natural environment.

- **Promote duck farming:** the youths are finding it to be good enterprise to set up farms for ducks and this has provide additional source for solving the problem of protein deficiency.
- **Generate more income:** farmers are able to earn more money from the reduced cost of rice production and benefit from duck production.

The interested person can look the following research paper for more details:

- **S. T. Hossain**, H. Sugimoto, G.J.U. Ahmed and M. R. Islam. 2006. Effect of integrated rice-duck farming on rice yield, farm productivity, and rice-provisioning ability of farmers. Asian Journal of Agriculture and Development (AJAD). Regional Center for Graduate study and Research in Agriculture, Philippines Vol 2. No. 1 & 2 pp. 79-86 ([http://web.searca.org/elibrary/asian%20journal%20of%20agriculture%20and%20development%20\(vol%202%20nos%201%20and%202\)/tanveer.pdf](http://web.searca.org/elibrary/asian%20journal%20of%20agriculture%20and%20development%20(vol%202%20nos%201%20and%202)/tanveer.pdf))
It is, therefore, clear that **duck is very useful for rice cultivation**. It can control weeds effectively and can reduce the use of chemical fertilizer for rice cultivation. Duck is a waterfowl that is easy to raise and to supply eggs and meat output in short period. Duck's feather also has economic values. This is make great contribution to safeguarding food security for the people and to protecting the environment. Rice cultivation using duck is a new technique and integrated approach that need thorough study and research for improvement for large scale adoption by the resource poor rice farmers in Bangladesh and others. The technology became very popular to the farmers of Bangladesh particularly eastern and southern region.
- **S.T. Hossain**, H. Sugimoto, H. Ueno and S.M. Rafiul Huque. 2007. Adoption of Organic Rice for Sustainable Development in Bangladesh. Journal of Organic Systems (NewZealand). 2 (2) : 27-37 ([http://www.organic-systems.org/journal/Vol%202\(2\)/pdf/27-37%20Tanveer%20Hossain%20et%20al%20%20JOS%20\(modified\).pdf](http://www.organic-systems.org/journal/Vol%202(2)/pdf/27-37%20Tanveer%20Hossain%20et%20al%20%20JOS%20(modified).pdf))

I think, still there are many potentiality and scope to extend this Rice-duck technology in the different region of Bangladesh and other rice growing countries. It has many benefits for the rural development and also has potentiality for the fulfil of the concept of sustainable agriculture.

I will be happy if any interested organizations or project or person contact me for the establishment and development or extension this system either in Bangladesh or abroad.

With thanks,

Shaikh Tanveer Hossain
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Ehime University, Japan
and
Senior Scientific Officer
Bangladesh Rice Research Institute
Gazipur, Bangladesh

Contribution by Yusuf Ali, Bangladesh Agricultural Research Institute(BARI)

Dear all,

I think Dr Pradip is perfectly right on the aspect of implements. In Bangladesh conditions all types

of agricultural implements including power tiller, tractor, STW, DTW, Maize sheller etc are available on per hour hired basis. So big farmers or entrepreneur/businessmen come forward to purchase those equipments and then go on hiring. Definitely for small farmer procuring of equipment will not be profitable until he hire it out. Most of the farmers are under small group and mechanization is progressing fast in this model. I believe good technology/implement is important along with follow-up actions, then right person is take it up if it is economic.

With regards,

M Yusuf Ali
Bangladesh

Contribution by OP Rupela & Subhash Mehta

Following comments address responses from several including Alberto Zezza, Carol Kayira, Anna Snider and Profs Elamini and Onimovo.

We are quoting (see excerpts below) from Joseph Arena's paper [Archive - A Journal of Undergraduate History; Volume 8, May 2005; Published at the University of Wisconsin-Madison, USA], the full paper can be found at:

http://km.fao.org/fileadmin/user_upload/fsn/docs/Agrarian%20crisis%20%20Arena.doc, in an effort to respond to Alberto Zezza, Carol Kayira, Anna Snider and Profs Elamini and Onimovo.

You will observe from this research paper that the results of **agro-chemical-based agriculture** are good to start with but in the long run, besides damaging the soil, sub soil water and environment it adds to the risks of the farmers who must invest in seeds, increased quantities of fertiliser and water each year; being mono crops also attracts pests, needing high doses of chemical pesticides. Declining factor productivity of rice followed by wheat (both as mono crops) of rice-wheat cropping system in the Indo-Gangetic plain (covers four countries – India, Pakistan, Nepal and Bangladesh) is widely accepted, by the national (see research paper by Chand R. and Haque T. 1998. Rice-wheat cropping system in Indo-Gangetic region- issues concerning sustainability. Economic and Political Weekly 33(26): A 108-112) and relevant international research institutes operating in the region (see research paper by Hobbs, P. and Morris, M. 1996. Meeting South Asia's Future Food Requirements from Rice-wheat cropping systems: Priority issues Facing Researchers in the Post-Green Revolution Era. NRG paper 96-01. Mexico, D.F.: CIMMYT).

In the event of a draught, flood, etc, losing the crop means no harvest and the investment in these inputs is the cause of their debt in some cases ultimately leads to them committing suicide (presently a worrying phenomenon in several states of India). It is also well known that most of the subsidies, credit, and loan waivers go towards settling the farmers' debts, mostly for inputs thrust on them by the input traders, manufacturers and the extension system. In these circumstances **farming can only be sustainable provided i) a most successful farming systems (integrating annual-perennial crops and animals) of a given area is followed, ii) inputs are generated on-farm** [e.g. crop nutrient needs can be met by lopping trees specially grown on farm boundaries, and recycling of weeds and crop residues and animal excrements (if needed as fodder or for cooking food – their end products should return to the land); locally available botanicals for crop protection, see www.sristi.org for several recipes generated by farmers in Asia) – overall, **good agricultural practices based on organic farming principles involving locally available, low-cost and biological approaches are followed**. We are convinced that it is **do-able when scientists generate farmers-empowering agro-technologies and governments provide farmers-friendly policy support**.

This is the link to the Joseph Arena's paper:

'Systematic Errors & the Failure of the Green Revolution to Feed India':

http://km.fao.org/fileadmin/user_upload/fsn/docs/Agrarian%20crisis%20%20Arena.doc

Regards

OP Rupela & Subhash Mehta

Contribution by Eutropia Mwashu, from the Ministry of Livestock Development, United Republic of Tanzania

Dear all,

It is interesting to see that agriculture remains the best option for the livelihoods of small scale

farmers around the world! Indeed it is clear that a farmer friendly policy framework, less use of industrial chemicals for their soils and plants are prerequisites. I have a problem pestering me always - today in most African countries politicians desperate to be in power sing the song of providing chemical fertilizers and pesticides. Professionals with enlightenment on the issues that enhance sustainable agriculture have the dilemma of doing what the mighty politicians dictate. They have no political platform to preach on what it entails to build SUSTAINABLE AGRICULTURE.

Unfortunately agriculture for most of African countries remains the heart beat not only of small scale farmers but the major contributor of their GDPs! To me this is a crucial area for global debate. Politicians need to be educated on this as a global issue just as the Kyoto Protocol issue.

Best regards,

Eutropia Mwashu

Contribution by Binayak Rajbhandari, from the Himalayan College of Agricultural Sciences and Technology, Nepal

I agree with Ms Eutropia Mwashu's points. Similar trends are observed in other developing countries as well.

This trend among the politicians is the consequence of the influence of the concept of Green Revolution. I would like to remark it as **agriculture illiteracy** of the politicians. They need to be made aware by organizing special **educational workshops and mass meetings at the grassroots levels** where the farmers and/or professionals may share the positive and rewarding outcomes of sustainable agriculture initiatives. Here in Nepal, **bio-intensive farming system**, which is a kind of sustainable agriculture focused on the needs of small farmers, have shown **positive impacts on food security and household income of the concerned farmers**. Another step to make the political leaders aware and positive to the concept and practices of sustainable agriculture would be **sharing the negative impacts of chemical farming (green revolution initiatives) in India and USA**. Quite a big acreage of land in those countries have now been converted into deserts; and in parts water levels have gone too low.

If you provide the email account of your agriculture minister we may also write her/him about it. Keep up with sustainable agriculture initiative, we are with you!!!

Dr Binayak Rajbhandari
Chairperson
Himalayan College of Agricultural Sciences and Technology (HICAST)
PO Box 13233 Kathmandu, Nepal
<http://www.hicast.edu.np/>

Contribution by Linn Cohen-Cole, Wellesley College alumna, Atlanta

(Posted and introduced by FSN Forum Moderator)

Kindly find below an open letter to Hillary Clinton from a Wellesley College alumna. While discussing American politics is certainly not our objective, the letter surely has telling information and facts which are relevant to our current discussion on "The Way Forward For Small Holder Farmers":

http://km.fao.org/fsn/resources/fsn_viewresdet.html?no_cache=1&r=353&nocache=1

Contribution by Andrew MacMillan, former Director of Field Operation Division, FAO

It is a delight to receive a contribution from Eutropia. If my recollection of Greek is correct, her name means something like "good growth" – and what could be a more suitable name for someone with her commitment to better livelihoods for small-scale farmers?

I would like to make **three inter-related observations** at this stage of the debate.

First, many of us who have an agricultural training tend to **assume** that **all forms of improvement**, especially yield improvement, in small-scale farming **will result in better food security and nutrition for poor farm families**. I believe that we have to **engage farmers**, especially subsistence and sub-subsistence producers, **in finding and applying location-specific and affordable ways of improving their family food security and nutrition**, based on an understanding of local food consumption patterns (especially through the seasons), of deficiencies and the options for remedying them. We need to **engage them in examining options through a food security and nutrition lens**, rather than only from the more conventional agronomic and economic perspectives. In some cases, solutions may lie in expanding areas under production or raising labour productivity (to raise the calorie output per calorie utilized, e.g. through minimum tillage or, as suggested by some contributors, through machinery hire), diversifying to spread risks and improve diet quality, or adjusting cropping patterns to generate more out-of-season food production. In many cases options may mean making better use of resources available to farmers but not fully utilized: this would include off-season labour which can be used for land improvement (terracing, drainage, irrigation, preparing sites for tree-crop planting), or often underutilized organic matter for improving soil structure, water infiltration and soil fertility. For some, the best option is to move out of farming!

Secondly, there is a **tendency to assume that improved performance by small-scale farmers will be reflected in better nutrition** throughout the communities in which they live. This may happen in some cases, but it is rash to make such an assumption without a good understanding of **family and community behaviour in relation to asset, income and food sharing** – especially the **role of extended families in safeguarding the welfare of poorer relatives**, and **how this may be changing** with greater market integration, education, and seasonal or permanent migration of able-bodied members of the population to urban areas. If interventions have a food security and nutrition goal focused on all those who are undernourished in rural communities, **solutions that lie beyond farming system improvement are likely to be necessary**. One cost-free agricultural option which is often given scant attention is that in many situations it lies within the power of a community to **broaden access of poor families to land and protect widows' and children's land rights**.

Thirdly, if people are not able to grow enough food to meet their needs or to earn enough money to buy the food their families require, the best option for improving food security and nutrition is to **ensure that they have access to a regular and predictable cash transfer**. Many observers claim that this creates dependencies, undermines human dignity and is not a sustainable solution. However, no condition can be more dependence inducing than not being able to feed one's children, to be driven into selling off productive assets (including livestock) and to suffer increasingly frequent and severe illness. **Well-targeted and managed social security programmes** offer poor families the opportunity eating adequate and hence enjoying good health, improved employability, protection from asset shedding and the opportunity to start to climb out of deep poverty. They also translate need into effective demand and hence stimulate local markets. **They need to be seen as economically sound investments, not as "welfare"**.

Andrew MacMillan

Contribution by Charlotte Dufour, Food Security, Nutrition and Livelihoods Advisor, FAO Afghanistan

I completely agree with Mr. MacMillan's observations that too often we make assumptions on the nutritional impact of food security / agricultural interventions which do not necessarily hold true, and the need for holistic interventions that go beyond the farming system to improve food security.

As a nutritionist working with agronomists (in the Afghan Ministry of Agriculture to be precise), I found it useful to **'unpack' the causal process** that can lead **from improved agricultural production to improved nutrition and food security**.

With our team and in consultation with partners, we prepared the attached graph, which illustrates

the following: http://km.fao.org/fsn/resources/fsn_viewresdet.html?r=354

- the different steps between improved food production / income and impact on household nutrition

-the constraints that can prevent positive impacts on nutrition from taking place

- the activities that can be implemented to enhance the positive impact of a given intervention on nutrition.

This graph was very useful in sensitizing agricultural staff on what is needed to positively impact on household food security and nutrition, and the need to have a broader livelihoods approach.

As a nutrition team, it also helped us identify which interventions we could focus on to enhance the nutritional impact of ongoing interventions. For example, our main activities are integrating nutrition education, improved recipes and home-based food processing in ongoing agricultural and community development interventions.

Finally, the graph helps identify what outcomes to monitor when running a food security project, if we wish to monitor its nutritional impact.

Maybe this graph can be useful for other forum members.

Best regards,
Charlotte Dufour
(Food Security, Nutrition and Livelihoods Advisor, FAO Afghanistan)

Contribution by Professor George Kent, Department of Political Science, University of Hawaii, USA

In presenting Linn Cohen-Cole's fascinating critical attack on Hillary Clinton, our moderator said, "While discussing American politics is certainly not our objective, the letter surely has telling information and facts which are relevant to our discussion."

Let's be clear about how it is relevant.

Cohen-Cole's critique should not be viewed simply as a challenge to the US food system. **The food system is global**, in many ways. The problems she raised are not going to be solved by the US government. Thus, there is a **deep challenge here to those who are responsible** for the global food system.

Where exactly is the locus of that responsibility? Who has what authority to act? With what resources? With what legitimacy? interventions that go beyond the farming I governance with regard to issues such as climate change, but so far there is hardly any recognition of the need for serious attention to the management of the global food system.

The need is recognized in the medical journal Lancet, in its just-released special issue on maternal and child undernutrition. An article by Morris, Cogill, and Uauy says:

- The **international nutrition system**—made up of international and donor organisations, academia, civil society, and the private sector— **is fragmented and dysfunctional**. Reform is needed so that it can perform key stewardship functions, mobilise resources, provide services in countries...

- The **problems** of the international nutrition system are **long-standing and deeply embedded in organisational structures and norms**. The international community needs to identify and establish a new global governance structure that can provide greater accountability and participation for civil society and the private sector.

The editor of this special issue says, "The international nutrition system is broken" and "New

governance arrangements are urgently needed.”

If we on the FSN Forum are going to conduct a **global discussion of food systems**, maybe we should spend some time zooming out to take in the big picture, and ask **how the global food system can be fixed**.

Aloha, George

Professor George Kent
Department of Political Science
University of Hawai'i, USA

Contribution by Dr. El Fadil Ahmed Ismail, Food Research Centre , Agricultural Research Corporation,SUDAN

Dear all,

Maybe Professor George Kent is grasping the overall view and is also well aware of the consequences of policy maker's misconduct towards global policy issues. Anyway, this is always the case at the local, national, or global level, maybe a human nature. To me, it is a problem of SELFISHNESS. We all know that the supreme powers that won the II world war are dictating their interests (not their values) to dominate the global economy. This has resulted in tremendous imbalances in every aspect of life on earth. **The absence of VALUES-ORIENTED LEADERS** has resulted in disastrous impacts everywhere, and in all domains, like politics, economics, environment and even science.

Politicians with double standards always keep their interests above the values they ask people to vote for. In reality two types of trends and attitudes (protected by power) are now on earth to impose

- Interests which are pro values (few people, few countries)
- Interests which does not consider values (many people, many countries,)

And it is clear which one is winning, simply by counting the number of people suffering from hunger, poverty and malnutrition (source: you can refer to UN reports). In conclusion, after 6 decades of failure to achieve provision of the basic needs to everybody on the globe, we raise more slogans to extend the list to include and have a better quality of life. Therefore I do call and make emphasis on the need for the international community to identify and establish a new global governance structure that can provide greater justice and equity for the welfare of mankind on earth. This requires setting of rules that put morals and values at the front. Consequently, this would lead to justice, equity that can mobilize resources and provide services to everybody irrespective of his race, religion or country.

To sum up, I think the world's food problem is SELFISHNESS of the richer vs. the poor. If the richer put 2.5% of their incomes to the poor it would be quite sufficient to eradicate poverty and malnutrition.

Let us start simultaneously a global **discussion on the need for morals (values-oriented) systems**, in all aspects of life and I am sure you may not find hungry people on earth, unless they want so.

Best regards

Dr. El Fadil Ahmed Ismail

Contribution by George Kent

FSN friends –

Dr. Ismail speaks about policy makers' misconduct toward global policy issues. Are we talking about criminality? Or are we talking about policymakers who simply pursue what they see as their personal and national self interests, obeying all the laws in the process? If leaders do what they are taught to do in school, is that misconduct? Dr. Ismail says it is a problem of selfishness, but many of our young people are taught that selfishness is a virtue. Dr. Ismail speaks of the absence of value-oriented leaders. We do have value-oriented leaders, but they are pursuing the wrong values. At least they are wrong from Dr. Ismail's perspective and my perspective and maybe yours as well.

Dr. Ismail speaks of 6 decades of failure to achieve provision of the basic needs to everybody on the globe. I have been watching this closely, for decades. I can only conclude that there has never been any serious global effort to achieve provision of basic needs to everybody on the globe. There is lots of fine rhetoric and there are important sounding meetings, but there is little substance. For example, people speak about the Millennium Development Project as if it were an important effort, and talk about assessing its progress, but there is really no global project there to be assessed. If any of you can find it, please let me know.

I certainly agree with Dr. Ismail's conclusion about the **need for improved global governance**, and the **need for discussion of values, especially as related to food and nutrition issues**. You may be interested in an edited book of mine on *Global Obligations for the Right to Food*, just published by Rowman & Littlefield. It is described in a flyer available at: <http://www2.hawaii.edu/~kent/GORFflyer.doc>

In one of the concluding chapters I argue that the key to understanding hunger in the world is that those who have the power are not the ones who have the problem, and those who have the power simply do not care enough about those who have the problem.

The situation is actually worse than that. As I suggest in the following essay, **if we are going to address the problem of hunger, we should have a good understanding of its benefits**.

Aloha, George

Essay: The Benefits of World Hunger

We sometimes talk about hunger in the world as if it were a scourge that all of us want to see abolished, viewing it as comparable with the plague or AIDS. But that naive view prevents us from coming to grips with what causes and sustains hunger. Hunger has great positive value to many people. Indeed, it is fundamental to the working of the world's economy. Hungry people are the most productive people, especially where there is a need for manual labor.

We in developed countries sometime see poor people by the roadside holding up signs that say 'Will Work for Food'. Actually, most people work for food. It is mainly because people need food to survive that they work so hard, either in producing food for themselves in subsistence-level production, or by selling their services to others in exchange for money. How many of us would sell our services if it were not for the threat of hunger?

How many of us would sell our services so cheaply if it were not for the threat of hunger? When we sell our services cheaply, we enrich others, others who own the factories and the machines and the lands and, ultimately, own the people who work for them. For those who depend on the availability of cheap labor, hunger is the foundation of their wealth.

The conventional thinking is that hunger is caused by low-paying jobs. For example, a recent

report tells about 'Brazil's ethanol slaves: 200,000 migrant sugar cutters who prop up renewable energy boom (Phillips 2007)'. While it is true that hunger is caused by low-paying jobs, we need to understand that at the same time hunger causes low-paying jobs to be created. Who would have established massive biofuel production operations in Brazil if they did not know there were thousands of hungry people desperate enough to take the awful jobs they would offer? Who would build any sort of factory if they did not know many people would be available to take the jobs at low pay rates?

Much of the hunger literature talks about how it is important to assure that people are well fed so that they can be more productive. That is nonsense. No one works harder than hungry people. Yes, people who are well nourished have greater capacity for productive physical activity, but well nourished people are far less willing to do that work.

The nongovernmental organization 'Free the Slaves' estimates that currently there are about 27 million slaves in the world (Free the Slaves 2007). They define slaves as people who are not allowed to walk away from their jobs. Their count includes people who are literally locked into workrooms and bonded laborers in south Asia. However, they do not include those who might be described as slaves to hunger, people who are free to walk away from their jobs, but have nothing better to go to. What are their numbers? Maybe most people who work are slaves to hunger?

For those of us at the high end of the social ladder, ending hunger in the world would be a disaster. If there were no hunger in the world, who would plow the fields? Who would harvest our vegetables? Who would work in the rendering plants? Who would clean our toilets? We would have to produce our own food and clean our own toilets. Of course people at the high end are not rushing to solve the hunger problem. For them, hunger is not a problem, but an asset.

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Contribution by FSN Forum Moderator

Excerpt of the final the summary of the discussion "Drawing lessons from food security and nutrition research, analysis and information for improved decision making and response".

See full text at:

http://km.fao.org/fileadmin/user_upload/fsn/docs/Final_summary_16Oct-16Nov_drawing_lessons_FSN_info.doc

Effectively link research and programme/project activities to policy making

- Following every stages of the **policy making processes** (problem identification, agenda setting, agenda debate, policy decisions, implementation, monitoring and evaluation) and involving wide range of stakeholders. Better design policy assistance project: better state how the intervention was expected to fit into the policy process continuum and what was expected in terms of policy results or development of strategies (C. Lagu, H. Tran)

- Ensuring **FSN are among policy priorities** of decision-makers e.g. by support streamlining of FSN into the country reference policy frameworks, support advocacy activities, making explicit the relationships between FSN and country priority objectives, demonstrate the importance of hunger reduction for poverty alleviation and economic growth (S. Boetekees, C. Lopriore)

- Undertake **Users (or decision-making) Needs Assessments** to identify requirements in FSN information e.g. by carrying out a **stakeholder analyses** to analyze the different decision-making levels: who they are (power/influence), where (or at which level) they operate (central vs decentralized), what type of decisions they face, how they take them – including: extent of participation, (incl. what, why and how they use information (if at all) in these decisions (i.e. who needs what information and why?) (C. Lopriore)

- **The EXPRESSED NEED** for information is to fill in information gaps at higher echelon level at the end of donors rather than a direct need requested by local government in terms of priority settings (E.F.A Ismail). Necessity of a policy dialogue to settle down the question of priorities and goal trade-offs among "donors".

- Research actually suggests a **particular course of action**, recommendations on the implementation processes; and challenges existing assumptions or institutional arrangements (D. Melvin, H. Tran, J.L. Vivero Pol)

- Politicians and decision makers get influenced by different channels, which implies that similar messages should be conveyed to different stakeholders (NGOS, Ministries, Universities, public media, internet, scientific papers), so as **the ideas to reach the politicians by several means**. E.g within the Latin America Hunger Free Initiative three components are supported: A.- Awareness-raising to position hunger in national and regional agendas B.- Strengthening national capacities, through technical training, policy backstopping, and promotion of right to food and legal frameworks. C.- Applied research, systematization and Food Security Observatory (J.L. Vivero Pol)

- **Find, nurture and promote national leaders**, champions who are really committed with hunger eradication, political or civil society leaders who are capable of speaking to large audiences, write to the public, mobilize masses, influence politicians. Without a champion (s), project approach will be limited to bureaucratic and technical recipes, with not that much receptive audience in national governments (J.L. Vivero Pol)

- Importance of funds availability to maintain the system viable (E.F.A Ismail, F. Imakorit-Oumo)

Contribution by Emily Jackson Levitt, from Cornell University

Regarding **mainstreaming farmers' interests into policymaking/ existing initiatives**: In **Afghanistan** Cornell University and FAO have been working together to understand the malnutrition/food security situation through the farmers' (male/female) viewpoint. This has taken two forms. One is **problem trees** where the issue of concern to the local community is put at the top of a large piece of paper and then the cascade of underlying causes are drawn out through discussion. This helps the **community people identify the varied interlinked issues and how many different actions contribute to food and nutrition** (i.e. roads, health care). Also, in my doctoral dissertation work I **interviewed community, provincial and national level stakeholders about their views on problem definition, causes and solutions. I composed their responses into table with categories based on the UNICEF framework**. Issues raised were categorized into domains of the UNICEF framework. I was then able to **compare the varying stakeholder views from various administrative levels** using a common tool, giving equal weight to the voices of the different stakeholders. It has been very enlightening and has been shared with policymakers who requested this work to help inform planning.

Emily Jackson Levitt

Contribution by Op Rupela (Facilitator)

This is in response to the contribution by Binayak Rajbhandari, from the Himalayan College of Agricultural Sciences and Technology, Nepal. I am keen to obtain copy (copies) of documents that may support the statements in his e-mail below. I am sure most would agree that it would be a good idea to widely share such data (where available) widely. It would help sustain the drive. Great if Binayak Rajbhandari could share such reports/data.

“..... in Nepal, bio-intensive farming system, which is a kind of sustainable agriculture focused on the needs of small farmers, have shown positive impacts on food security and household income of the concerned farmers. ----- “

Contribution by Marco Knowles, Right to Food Unit, FAO

Dear FSN-ers,

We would like to follow-up on the request made by George Kent for practical solutions on **how to include the interests of small farmers in policy making. The purpose of this contribution is to stimulate discussion.**

Firstly, we would like to emphasise the **importance of small farmers' participation throughout the policy cycle i.e. not only formulation but also implementation.** This is because, even if policies are formulated participatorily and small farmers' interests are reflected in the policy statements, during implementation policies can be distorted and implemented in such a way as to reflect the interests of power holders.

With respect to "**solutions**" for including small farmers in policy processes, in principle a **rights-based approach** can contribute to this. Broadly, this is in **two** mutually reinforcing ways:

i) By making those involved in policy formulation understand that they have the obligation to include all stakeholders in the process since participation is a fundamental principle of human rights . However, getting policy makers and implementers to recognise these principles and apply them is not easy. Whatever the case, this official recognition is necessary but certainly not sufficient to ensure that principles are effectively applied in practice (see below). More thought and research is needed to understand how politicians can be convinced to promote human rights principles, possibly by demonstrating - through empirical research - the value-added of a rights-based approach in practice. This involves a shift in thinking from arguing that human rights should be applied because they exist and because of the threat of recourse, to also pointing out additional ways in which development can be deepened and accelerated by adhering to human rights principles. i.e. combining a strong pragmatic argument with the normative/ethical arguments.

ii) The other approach is that constituents can demand change, action, their rights, their "space" in policy processes. A rights-based approach can be used to nurture this process in countries that have ratified relevant Conventions. However, politicians will respond to the extent that they think it is in their interests to do so. For this bottom-up process to give tangible results will take considerable time. Issues remain as to who is best poised to promote bottom-up processes. It is also a big step from grass roots to national levels. The first step is really community-based action planning, next local level (sub-district, district, municipal) planning, and so on. It is also **fundamental to ensure that small farmers - and other marginalised groups - are willing and able to participate.** For instance, if government is unresponsive or participation too time consuming and costly small farmers may not be willing/able to participate in policy processes.

We very much welcome a specific and more in-depth discussion on experiences in the practical application of rights-based approach at national and local levels.

All the best,

Marco

Contribution by Charles Lagu, Dr, Livestock Production Scientist, National Agricultural Research Organization (NARO), Uganda

Dear Forum members,

I would like to thank the various forum members for their diverse contribution on the topic, namely Professor George Kent, OP Rupela, Dr. Binayak. R. Mwasha. E, Dr. Ismail, Subhash Mehta and many others, plus the latest contribution and eye opening knowledge from Marco Knowles (ESA) who has highlighted on how to include the interests of small farmers in policy making with a right-based approach.

I want to talk about **the approach Uganda has taken to address small holder farmer needs and compare it with China** and later expose the challenges and setbacks we are facing in Uganda. **Members can then supplement further on the challenges and limitations and how they can be overcome for holistic welfare of the small holder farmer in the world.**

Uganda has decentralized and centralized political system (Central Government, District, Sub-county, Village). All these are planning centres where small holder farmers participate. The policy Governing modernisation of Agriculture is the plan for modernisation of Agriculture (PMA). PMA has **7 pillars**, namely; Research and technology development, National agricultural advisory services, rural finance, agro-processing and marketing, physical infrastructure, agricultural education and regulatory services. Out of the seven pillars of PMA **only research and agricultural advisory services has taken off but poorly financed**. Yet the share of national Agriculture budget hardly reaches 3% annually of the national Budget. The Professionals in these institutions are **poorly facilitated with logistics and implementation is always compromised** by politicians who at every stage pass the budgets for all the sectors. The credit lending institutions have very high interest rates (24-36% per annum) and most enterprises are rain fed; there are no irrigation facilities for small holder farmers. Agro-processing and marketing are not well organized yet domestic markets are not yet saturated.

In July 2007, I was in China for a whole month. I observed that the agriculture system is well organised . This followed an out break of famine that hit the country 52 years ago. The new achievements and experiences of agricultural development in China expanded greatly since China carried out its **opening up policy**. They have **favorable policies, laws, regulations for smallholder farmers**. They give **incentives to farmers in terms of agricultural inputs**, Government **highly supports agriculture education, Research, science and technology**. They have strengthened and well facilitated agricultural extension services and well developed infrastructure in most of the provinces, municipals, counties and townships. Farmers easily access financial services, markets and appropriate technologies for agro- processing. The agricultural lands are irrigated and there is a satellite system that aids information flow in terms of drought, floods etc. There are over a million extension staff in the country (1 extension staff: 1200 farmers). China can feed 1.2 billion of her population which is 20 % of world population compare this with Uganda which has a population of about 30 million as at 2008 and yet can not sustainably feed her population and export the excess.

In Uganda, the frame work and the policy issues as outlined in the plan for modernisation of Agriculture for the benefit of small holder farmers is in place but we have the following **challenges: transparency, corruption, bad governance, poor implementation and refusal to put in place good practices adopted from other countries** like China, US and Britain etc.

Some sectors like Agricultural Research in Uganda are trying their level best but other systems must also work seriously to achieve a holistic desirable pathway. Your inputs as per these issues are wellcomed.

NB: in the next contribution I will show you the prosperity for all (PFA) strategy in Uganda to uplift small holder farmers from poverty.

Thank you,

Charles Lagu (Dr)
Livestock Production Scientist
National Agricultural Research Organization (NARO)
Uganda

Contribution by Joseph Opio-Odongo Policy Specialist – Environment, UNDP Regional Service Centre for Eastern and Southern Africa

Dear Charles,

I very much appreciate the efforts you make in trying to understand why the small holder farmers

in China seem to perform better than their counterparts in Uganda. You may be right that the differences in sector and macro policies, institutional support and empowerment of agricultural professionals provide the explanation. While you point to the PMA as the policy framework intended to facilitate the development of small holder farmers in Uganda, you fail to provide some highlights on the strengths and challenges facing the PMA.

My knowledge of Uganda indicates that the country also has had its fair share of the marginalizing the small holders when it comes to public policy making and investment decisions. **A tenuous assumption has prevailed that small holder farmers' knowledge and techniques are invariably backward, thereby strengthening the hands of agricultural professionals/technocrats and politicians in dominating the development and implementation of strategies for agricultural modernization in Uganda.** Yet it is hard to believe that agricultural professionals in Uganda have ever allied with small holder farmers. Instead of empowering the small holder farmers to enable them embrace workable aspects of modern technology, the agricultural professionals have generally longed for the abolition of small holder agriculture in the country. The engagement between the two parties, if any, has never been strategic!

Wishing away the small holder farmers is not going to be easy. Neither is a legislative fiat workable. Instead we need a **careful examination of how the policy and institutional frameworks can be reformed** to better serve small holder agriculture. This includes deliberate and careful support to genuine small holder organizations in order to ensure that there is sufficient countervailing power to ward off the other vested interests that have undermined small holder development in the country. Greater investment in equitable development of infrastructure, improvement of market access and strengthened market intelligence for the small holder farmers is also desirable.

I believe that **with sufficiently empowered cadres of small holder farmers**, Uganda should be able to witness, in the very near future, a durable crusade for transparency and accountability in the delivery of basic agricultural services, a drastic decline of corruption with impunity in the sub-sector, the emergence of rural leaders who are true to their calling, and a significantly improved project implementation that is carefully monitored by organizations controlled by small holder farmers. We simply have to give them a chance to shape their destiny!

Joseph Opio-Odongo

DDC, UN Avenue Gigiri.
P. O. Box 30552, 00100 Nairobi, Kenya.

Contribution by Charles Lagu

Dear all,

Professor George Kent raised important issues on the benefits of World hunger (below). He looked at it in the perspective of hunger being a basic need triggering responses for hard work. He illustrated these with good examples. However, I would like to raise a concern on the other side of the coin where rich or well to do men and women have continued to work even harder although hunger is no longer their constraint. They have eclipsed hunger as a physiological need. e.g. Bill gates, George Kent, Huyen Tran, James Mulwana(Uganda), Hillary Clinton, Tony Blair and Barack Obama etc.

Does it mean that hunger still is phenomenal in their hard work?

I would be grateful for a feedback from Professor George Kent.

Charles Lagu (Dr)
Livestock Production Scientist
Uganda

Contribution by Kevin Gallagher, Senior Expert for Programme Development, FAO.

Dear Charles,

In my opinion, Uganda will have to be much better than China to achieve the same agricultural potential because:

- China has a **much bigger urban (domestic) market** than Uganda - Uganda will have to seek international/sub-regional markets but lack international networks and market gathering capacity (e.g. french, spanish, arabic, etc.) while China works in Chinese

- China has a **much greater value addition** (e.g. packaging, processing) **for products in their rural cities** which provides jobs including the making of the machines themselves - while Uganda adds little value and produces few equipment.

China has a vertically integrated system of production **with massive government support and subsidies** (e.g. from roads to loans)

- China has a **stronger export capacity due to massive volumes**

- China **reinvests profits at a higher rate** in China than Ugandans reinvest in Uganda

- China's urban population is employed in industry and services making both **better markets for products and remitters of cash back home**

- China has **social protection (education, health)** that keeps its population healthy and long living

- China **research investment is much greater** but **costs much less per capita**

However, I would not say that China's small farmers are "better farmers" than Ugandans but Chinese small farmers certainly have a lot **more opportunities** to benefit from the hard work, good health, literacy and long life.

Best regards,
Kevin Gallagher

Contribution by Ayurzana Puntsagdavaa, Rural Infrastructure and Agro-Industries Division, FAO

In my opinion, smallholder farmers can sustain their living, even **they can earn higher income by producing for remunerative markets** if the policies and strategies should be directed towards creating/improving enabling environments for smallholder farmers' engagement in markets and appropriate and timely service provision including financial, input, technological and information.

There are many cases where smallholder farmers play a supplier role to big companies not only in local markets, but also in international one. Moreover, in certain circumstances **small producers may have a comparative advantage over larger commercial growers** as some experts discuss. There are four obvious reasons for it: (i) Less effect on overall supply in the event of crop failure of one or few farmers (idiosyncratic risk); (ii) More flexible production portfolio (due to limited fixed assets and more family labor) of smallholders, which would help in quickly responding to consumers' changing preferences; (iii) Smallholders could ensure better quality as they strictly comply with the production practices advised by the firm mainly due to more family labor and lower bargaining power; and (iv) Low marketable surplus of smallholders increases their dependency on the firm for profit maximization.

A geographically dispersed base of small producers can be effective risk-spreading strategy for

supermarket suppliers and/or can afford greater flexibility in the procurement of relatively small quantities of product that meet specific and exacting standards. For example, Homegrown (Kenya) sources from small producers in a number of areas in order to manage the risk of not fulfilling a supermarket order due to crop failure because of inclement weather or pest infestation. Likewise, Hortico (Zimbabwe) responds to changes in quantities demanded by supermarket at short notice with little or no wastage because their supply base is distributed among a large number of small suppliers organized into relatively small collection centres.

However, the opponents argue that smallholder farmers are excluded from markets due to their low economies of scale, their inability to meet market requirements (quantity, standards, quality, good agricultural practices etc.). Smallholder farmers are dealing with these problems by **organizing themselves into groups, associations and cooperatives** with or without assistance from the state, NGOs or private sector.

I remain optimistic for smallholder farmers' future around the world.

Best regards,
Ayurzana Puntsagdavaa

Contribution by George Kent

Regarding the discussion of "The Way Forward for Small Holder Farmers" I would like to offer a word of caution. These are people first, and small farmers second. **When we consider ways in which their livelihoods might be improved, we should be open to non-farming options as well.**

The enormous economic gains in China in recent decades have been partly due to improvements in small-scale farming, but they were also partly due to the fact that many people got out of farming. Many people who left farming and got into, say, manufacturing, improved their situations. This in turn often resulted in improved situations for those who remained in farming because they now had more customers with good incomes.

Limiting one's analysis only to ways in which small-scale farming might be incrementally improved could lock people into a bad situation. There may be too many small holder farmers. Increasing yields for individual farmers might result in oversupply and thus reduced prices. **Farmers and the governments that want to support them should consider possibilities for diversifying within farming, and also possibilities for productive work outside of farming.**

Aloha, George

Contribution by Charles Lagu

Dear forum members,

I would like to thank Joseph Opio-Odongo and Kevin Gallagher for their comments on my contribution I made in the week comparing Uganda's approach and China's approach in helping small holder farmers to improve their status. I absolutely agree with Kevin Gallagher's views that small holder farmers in China have a lot more opportunities which were because of a focused and committed Government policy of People's Republic of China. Taking on Joseph Opio-Odongo's comments I want to point out that plan for modernisation of Agriculture (PMA) strengths are; research and extension, education networks in place.

PMA's weaknesses are; poor road network, transportation, market facilities, communication and information system, storage and agro-processing (value addition), high costs of electricity, limited rural finance etc. Although to some extent I agree with Joseph's view that engagement between agricultural professionals in Uganda and smallholder farmers have not been strategic, I attribute this due to confusion from our policies which are usually formed to achieve political objectives. The professionals in agriculture sector are victims of that vicious cycle of confusion in policy implementation which you do understand much better. Our policies are generally good but the ingredients involved in the implementation are haphazard as far as the function of production, the function of consumption, the function of exchange and public problems as a reason for public

policy is concerned. World Bank (Trans.1997) states, "It is impossible to achieve economic, social development without an effective government... It is an effective government that is key to economic and social development." The function of consumption in public policy should aim at constructing systems, a democratic credo, transparent politics, good governance etc. This will lead to emergence of rural leaders who are ready to forge ahead. But the question is still how we can get there that we are able to get leaders who are true to their calling. I suggest that civil sermons in moral values in empty pulpits cannot work, democratize, provide common wealth, state must stop being hostile to its people, there must be budgetary discipline, facilitate policy technocrats adequately, modernise and liberalise and promote public private partnership harmoniously. I agree with George that the way forward to smallholder farmers should include possibilities of diversifying within farming and outside farming.

Thank you
Charles Lagu (Dr)

Contribution by Charles Lagu

Dear forum members,

Uganda is now adopting the **prosperity for all (PFA) strategy to uplift small holder farmers from poverty to improved livelihood**. The prosperity for all strategy is a concept aimed at **tackling poverty at household level**. Every household is targeted to have a daily income, periodic income (3-4 months), long term income (1 year and beyond). Each household may earn income in a group economic activity, be organized in a marketing cooperatives, savings and loan groups for their intermediation and correct enterprise selection. Government shall continuously and regularly identify, monitor and link producers to national, regional and international markets in order to determine and recommend to them enterprises that the households should engage in and all ministries shall be compelled to have similar focus and to ensure that resources are rationalized and harmonized to avoid fragmented approaches that had bedeviled previous efforts in tackling poverty among small holder farmers. There will be deliberate efforts to link farmers with industries for processing. All these interventions will hopefully result in households in Uganda earn an annual income of 20,000,000 Uganda shillings (approximately \$11,696). Your inputs as per these strategies are highly welcomed for smallholder farmers in Uganda and the world over.

Thank you

Charles Lagu (Dr)

Contribution by Fatima Ali

I have several suggestions to improve the economic and social levels for small farmers

- 1 - legitimate act under the heading schools where farmers develop outreach programmes working to solve the problems of farmers as well as educational programs and a comprehensive training
- 2 - Action Cooperative Associations and financed by the donor
- 3 - Action Union particular small farmers working to address all agricultural issues
- 4 - the introduction of technology in agricultural work

Fatima Ali

Contribution by OP Rupela

My apologies for long silence. This was significantly due to my official travel to places where access to internet connectivity was difficult and a rare commodity. I recently drafted a document for discussion with peer scientists at ICRISAT. A further revised version of this paper is available at http://km.fao.org/fsn/resources/fsn_viewresdet.html?no_cache=1&r=376&nocache=1 for sharing with participants of this debate. We (Subhash and myself) see **this communication as conclusion of this debate from our side** and hope that **this will help at least some to consider solutions to the problems of small-holder farmers differently than what is**

prevailing today and will try out suggestions coming out of this debate. We enjoyed participation in the discussion and thank you for the involvement.

Subhash and I agree that **organic farming (OF) systems are very relevant to 'small-holder farmers'** in developing countries. But the organic farming we support is different from what is widely perceived and known and therefore it is important to explain the differences between the two.

The widely perceived **OF is propelled by market forces** where the **process of crop production is governed and certified by accredited agencies and is supported by interested countries.** More information on this is available on www.ifoam.org <<http://www.ifoam.org/>> . IFOAM (International Federation of Organic Agriculture Movement) has played a very important and leading role in sustaining and promoting this type of agriculture presently practiced in 108 countries of the world (listed on www.ifoam.org 15, March 2008) on over 31 million hectare (includes forest produce). Its efforts/drive to achieve this should be complemented.

According to Codex Alimentarius (Food Code) Commission (CAC), **organic agriculture is holistic food production management system, which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity.** It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system. The area under OF increased rapidly in the past five years and is expected to increase more rapidly in the next decade. This has happened despite the fact that **it is widely unrecognized and not supported by scientific community.**

I have learnt through my limited experience of about eight years that there are **several scientific strengths in OF and yields can be sustainably high.** As a scientist, the only difficulty I find is the restrictions of eco-friendly inputs, e.g. of beneficial microorganisms and some other low-cost but environmentally benign materials unless these are also certified. I do understand that with appropriate discussions some restrictive items are also allowed by the accrediting agencies.

Indeed soaring cost of production is an important issue for farmers in Semi-Arid Tropical (the house of worlds poor). It is with this focus that the compromised agriculture production concept given in the attached file is proposed. It is based on organic farming principles as defined above, but in addition, it harnesses lessons/experience/knowledge of modern agricultural science when/where it supports use of low-cost inputs and the use/recycling of locally available natural resources. In this perspective, use of synthetic pesticides is not needed because biological means for protecting crops (when mastered and understood by farmers) are available and reasonably effective. But an informed and eco-friendly use of crop nutrients where their deficiency is known to limit crop production will be a good idea . We have chosen to call it "**Science-based Organic Farming Technology or SOFT**". In developing opinion in its favour, several queries have been faced in the past, five years or so, and therefore the attached document is written in 'question' - 'answer' form.

The major reasons of proposing SOFT is **to convince scientists that organic farming systems are based on scientific principles and uses farmer-empowering agro-technologies.** We also wish to **convince policy makers that the proposed SOFT will not threaten food security of a nation, because eventually this will result in a more productive soil and will not reduce yields.**

It may, however, be noted that use of SOFT does not prevent practicing SOFT farmers to switch over to certification-based OF and take advantage of the potentially higher price of the certified products. Unlike OF, SOFT is only a concept at present and we wish that it is taken seriously by scientists and policy makers in developing countries and take it into the development stream.

With best wishes,

OP

