

SUMMARY OF THE FSN FORUM DISCUSSION

GARDEN IN A SACK FREE DISCUSSION

Proceeding available at:

http://km.fao.org/fileadmin/user_upload/fsn/docs/PROCEEDINGS_Garden_in_a_sack.doc

I. ISSUES RAISED

Main issues related to urban agriculture and (P.Pascal):

- People living in urban areas are particularly vulnerable to soaring of food prices.
- The inhabitants of the slum in Nairobi do have the appropriate know-how to grow vegetables; the main problem is the lack of land and cash to buy agricultural incomes.
- Urban agriculture should be one of the pillars of the food security strategy in the coming years.
- How the sack gardens project promoted by Solidarites in Nairobi could be replicated in new contexts such as other slums in Nairobi and also in other countries.

II. OPPORTUNITIES AND SUGGESTIONS

- **Opportunities of applying sack gardens:**

- This project makes sense when the first limiting factor is the scarcity of arable land and a garden in a sack constitutes a great opportunity/ alternative. The good thing of having the garden in a sack is that you save water and you can put the sack wherever you want. (P.Pascal)
- The schools would be good sites for teaching students, and also adults, about sack gardens (G.Kent). Where there is no land available in school premises vegetable production could be started by using sack garden techniques. (P.Pande)
- Carry out systematic research on sack gardens, especially to analyze their advantages and disadvantages compared to conventional gardens. (G.Kent)
- Food based approaches can make a measurable difference to people's food consumption and nutrition. (B. Thompson)
- Small scale homestead vegetable program can be a very good option to improve the current food crisis situation as well as to improve the living conditions of slum communities. (S.T. Hossain, R. Varela)
- One of the advantages of sack gardens are their low physical requirements and thus is considered a potentially appropriate option for households with low adult labour ratios (i.e. child and female headed households, elderly headed households, households with chronically ill adults). (L. Bell)
- The technique of the sack has two main advantages: cropping without land and have an easy management of water resources. (P.Pascal)

- The Sack Garden techniques can be applied to the following conditions (R.Varela):
 - Places where there is shortage of land.
 - Draught prone places with a very critical shortage of water.
 - Very attractive and efficient to address vulnerability interventions.
 - Excellent approach to complement school garden initiatives, improve household income and address gender issues.
 - Very appropriated complement to any community development initiative and/ or emergency program.
 - More importantly, they have an immediate impact and are much appropriated to the grassroots groups.
- **Suggestions for promoting urban agriculture and sack garden techniques:**
 - Sack gardens in schools could be linked to school feeding programs. (G.Kent)
 - Until today this is being practiced especially in urban areas where land is scarce. What we really need to do is to strengthen advocacy for its implementation (I.Angeles-Agdeppa)
 - Carry out systematic research on sack gardens, especially to analyze their advantages and disadvantages compared to conventional gardens. Aid agencies could help in documenting sack garden experiences. A website should be created to distribute information about them. (G.Kent)
 - **Some suggestions to take concrete action towards sack gardens initiatives (R.Varela):**
 - Agree in principle that indeed FAO should support the broader dissemination of such techniques and the necessity of a concept note underlining the overall strategies;
 - Following that, garden sack instruction should be integrated in various FAO programs/projects
 - Partnership, particularly with WFP, NGOs and Civil Society is a must

While promoting such initiative, **the following activities could be carried out:**

- Conduct on farm trial to have a better understanding of water saving under vegetable production in sacks compared to normal production.
- Analyze yields from sacks compared to normal production.
- Identify the number of sacks needed per household taking into account production and consumption needs.
- Carry out a socio-economic analysis on the importance of production in sacks.
- Investigate the possibility of using water purification (test with moringa) to increase the availability of water for production in sack in dry land areas.
- Integrate production in sack with HIV, gender and environment programs where there is shortage of labour.
- Limit the period for all these lines of research to six months and finalize with the production of various brochures to feed into the abovementioned initiatives.
- Define a clear leadership to promote such initiatives within FAO. Such leadership should be exercised by the Special Program for Food Security and by the Emergency Unit.

III. SACK GARDEN EXPERIENCES AT COUNTRY LEVEL

- **NGO Solidarites "Sack Garden" Project in the largest slum of Kenya** (P.Pascal): The French relief and reconstruction NGO Solidarites implemented a small scale agriculture project in Kiambu and Kibera, two slums in Nairobi, Kenya. This project funded by the French government involved planting vegetable seedlings in earth filled sacks placed on rooftops or doorsteps. Each family has been given one to three sacks filled with earth and 6000 families are now cropping tomatoes, onions, kales or spinach. A nursery has been established in the slum. Some people are in charge of the management of the nursery whereas another group is in charge of training the beneficiaries. Each sack is 1 m³ wide which represent 5 m². One single sack can contain 50 seedlings of kales or spinach and 20 tomatoes plants. Vegetables are used directly and indirectly by the household to obtain food, access cash when needed and educate children. In average, each household increased its weekly income by 5USD. Given the fact that in Kibera the rent of the house cost around 6 USD/month, this is an important source of income.
- **Mid day meal schemes Programme in India** (P.Pande): The Mid Day Meal Schemes Programme is for children attending government schools and they are provided with food as specified by the Government rules. Some of the schools have initiated vegetable production in their premises to add the vegetables in the mid day food. This will help adding the essential nutrients and vitamins to the food that is provided to the children.
- **Small scale homestead vegetable initiatives in Gaza, Mozambique** (R.Varela)
 - Under FNPP programme (FAO-Netherlands Partnership Programme, the initiative was tested in Gaza for almost six months with tomatoes, lettuce, green pepper, spinach, cabbage, beets, parsley, turnip, onion, etc. The experiment was conducted at the FNPP office, and the rate of adoption was remarkable, particularly in the Northern Districts where drought and chronic malnutrition are a fact. Such technology showed very good comparative advantages.

Main conclusions:

 1. High and good quality production even surpassed the normal production season.
 2. The incidence of plagues and weeds are almost none.
 3. Much less time spent in different agricultural tasks.
 4. Saving on water is quite impressive.
 5. Overall production is very good. About 10 bags might be enough to feed a family.
 - Another initiative also tested in Gaza has to do with Moringa, an Indian native plant with high nutritional value and very powerful to purify water. FNPP tested it in Gaza and the results were also quite impressive..

For further information, contact FAO Mozambique for various brochures and pamphlets produced under the FNPP Programme.
- **A group called CL4 in South Africa** has used sack gardens for households with family members ill with HIV/AIDS. (L.Bell)
- **Philippine initiative** on food production where used cans or trash plastic containers are utilized to grow plants/vegetables to supplement households' food intake. (I. Angeles-Agdeppa)
- **WFP Multi-Storey gardens in the two Kenyan refugee camps in Kakuma and Daadab** (J.Friedrich): The Multi-storey gardens were supposed to address the challenges created by the encampment policy for refugees in Kenya which did not allow them to engage in agricultural activities outside the camp, the limited space inside the camp, scarcity of water,

security concerns for women moving outside the camp, and the limitation of the WFP food basket with regard to fresh and micronutrient-rich food. Several thousands of refugees participated in the programme. One has to note, that this type of programme is suitable for areas with similar challenges but will hardly compete with conventional kitchen gardens in areas where these are feasible.

- **ACF-USA Promotion of micro gardening in small bed-, tyre- and sack- form in the IDP camps in Northern Uganda.** Due to problems with access to land caused by insecurity around the IDP camps, ACF has been promoting small scale and small space gardening systems. The production has been very significant contributing to the households' food and consumption, as well as to the households' income through sale in the IDP camps. This activity has been promoted as component of an integrated nutrition- water- food security project in the North of Uganda. The results of the programme show, that even on a small space there is a big potential for vegetable production, and therefore an enhancement of the dietary diversity and influence on the nutritional status of the population.

For more information and programme documentation, contact Silke Pietzsch (sp@aaah-usa.org)

IV. PROPOSALS TO SCALE UP SACK GARDEN INITIATIVES

- **Call for papers** - Nutrition and Consumer Protection Division of FAO is seeking contributions/experiences which demonstrate that food based approaches can make a measurable difference to people's food consumption and nutrition for inclusion in the publication "Food based strategies for combating micronutrient deficiencies". The publication will focus on practical actions for overcoming micronutrient deficiencies in a sustainable manner through increased access to and consumption of adequate quantities and variety of safe, good quality food. The publication will gather a variety of relevant advocacy and technical material under one cover to encourage and promote further attention to and investment in such activities. (B. Thompson)
- **The Development of the Sack Garden Project in Dhaka, Bangladesh** - Solidarites could initiate some programmes in Dhaka and other big cities urban slums of Bangladesh to improve the livelihood of the community. (S.T. Hossain)

Background information: Currently in Bangladesh around 60 lakh (6 millions) people are living in different slums in Dhaka, the capital. The main features of these slums are:

- The overall level of livelihood security is poor and has a complex mix of urban and rural lifestyles;
- Most men are employed and a certain percentage of women are working outside the home;
- Many women skip meals each day to make ends meet. Families also have a poor intake of protein-rich foods and little dietary diversity. Overall, intake of protein-rich foods (such as meat, fish, and eggs) is lower;
- A higher percentage of children under 5 years old are malnourished and a major group of women are also malnourished;
- Hardly anyone has access to a registered physician due to economic reasons indicating greater risk and consequently poorer health security;
- A lack of basic services such as water, sewerage, drainage etc.;
- High densities, poor living environment, low literacy rate and little attention from the government;
- Most recently, the problem of high food prices.

- **Testing of specific techniques and analysis**, specifically (R.Varela):

1) Test for water stress

1. Set up a normal irrigated plot;
2. Set up sacs with different types of vegetables;
3. Look at irrigation and level of stress by using different intervals for putting the bottle in: in Gaza, we found that, during summer time, one may irrigate with two bottles (1 liter each) every three days without any problem;
4. Compare the final result (production) against different intervals.

Final results: Find the optimum level to recommend intervals for irrigation.

2) Labour Saving

1. Set up a plot under normal conditions.
2. Calculate time spent in each activity.
3. Elaborate a farm budget.
4. Do the same thing for the sac production.
5. Compare the results.

Final Results: Look at labour saving and other input vis-a-vis to production

3) Socio-Economic Analysis

1. Look at minimum consumption requirement for a vegetable.
2. Based on local price converted such minimum consumption in value.
3. Look at how much an HH, in average, should spend.
4. Test how many bags could produce the quantity needed.
5. Do a farm budget.
6. Compare the saving.

4) Nutritional Perspective and Food Aid Intervention

1. WFP is currently providing food aid (free distribution and FFW).
2. FFW could be tied to the production in sac (maize comes in bags that can be used for the program).
3. Do free distribution and ffw as are currently done.
4. Pick up a sample of HH and engage them in producing vegetable in sack under FFW.
 - a. Provide seeds to women and teach them how to do nursery.
 - b. Use small plants to distribute to the most vulnerable groups.
5. Monitoring what they do with vegetable.
6. Compare their nutritional status with others under normal program.

V. REFERENCES

- Action Against Hunger (AAH) sack gardens project in Uganda (J.Whirth):
<http://www.ennonline.net/fex/26/fex26.pdf>
- **Some brochures produced under the FNPP Programme promoting gardens in sacks techniques** (R.Varela):

- Panfleto Hortas in Sacos (gardens in sacks) at:
http://km.fao.org/fsn/resources/fsn_viewresdet.html?r=480
- Importancia da moringa na nutricao (Importance of the moringa plant for nutrition) at:
http://km.fao.org/fsn/resources/fsn_viewresdet.html?r=481
- Panfleto cultura de moringa (how to cultivate the moringa plant) at:
http://km.fao.org/fsn/resources/fsn_viewresdet.html?r=482
- Purificacao de agua (Purification of water) at:
http://km.fao.org/fsn/resources/fsn_viewresdet.html?r=483
- Testemunhos no uso da moringa na Africa (examples of the use of the moringa plant in Africa) at:
http://km.fao.org/fsn/resources/fsn_viewresdet.html?r=484