

RUAF – *Cities Farming for the Future* (RUAF-CFF)

PARTNER CITY PILOT PROJECT
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DISSEMINATION CITY – BANGALORE CITY

Home Gardens in Bangalore City in
select residential areas in J P Nagar and Banashankari

DRAFT FINAL REPORT

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0. Preamble and Genesis

Preamble

Like any other city, Bangalore is growing, in fact more rapidly than many other cities, both in terms of population and prosperity. As in most of the developing economies, the agricultural interest in peri-urban areas is shrinking resulting in increased migration to cities. On one hand, while the food needs are growing, the production and supply systems around the city are shrinking. Global food crisis, fuel crisis, climate change, growing social inequities, urban poverty, health and hygiene are adding to the complexity.

There are several ways these problems are being addressed and tackled, for instance, investments in infrastructure, better governing mechanisms and creative participatory solutions. We are focusing on an approach which we feel is being planned but to a limited extent only.

An approach, which would focus on strengthening peri urban production systems, recycling wastes for productive use, strengthening peri-urban farming communities and exploring gainful employment for urban poor communities. Therefore, we are focusing on giving attention to **Urban horticulture and Peri Urban agriculture**.

The overall thrust of the Bangalore programme is towards creating synergies among various stakeholders as well as illustrating feasibility of the 'ideas' through pilot projects towards

- enhancing agricultural interest and opportunities for those in the peri-urban areas so as to enable them to make a reasonable living;
- to help them grow healthy produce for self consumption as well as for potential urban consumers;
- to utilize the waste being generated in these areas productively in agriculture in those areas itself;
- though in a limited way, strengthen healthy habits in the citizens in the city to grow healthy pesticide free vegetables in the limited spaces they have, may be, as a hobby;
- Helping those urban poor to get gainfully employed in pursuits which would support maintenance of green spaces.

The draft report focusses on the pilot projects conceived and implemented by AME Foundation in partnership with regional and global partners – IWMI, Hyderabad and RUAF – Netherlands.

Genesis

The genesis of the project dates back to informal discussions with Henk de Zeuw of RUAF (in 2003) and Ms Gatyathri Devi representing IWMI (in 2005). AME Foundation with 25 years of experience in promoting ecological agriculture with resource poor farming communities was formally identified to be the focal point in Bangalore. An informal meeting of potential stakeholders of the project was organized in April 2006. In September 2006, an inception meeting was organized to which all dignitaries, social activists, Department heads, NGOs and few resident associations were invited. Presentations on preliminary survey findings were presented regarding focus areas as well as potential strategies. Thus, Magadi was identified as a potential area for strengthening peri urban agriculture and residential areas like Banashankari, JP Nagar as a startup for initiating interest in urban horticulture initiatives.

Several processes were initiated for strengthening multi-stakeholder enabling teams separately for both Banaglore city and Magadi (peri-urban area). The team met extensively visualizing goals, identifying strategies, activities and reviewing their progress. (more than 100 meetings in one and half years in both work areas). Not satisfied with meetings and strategizing, the enabling teams for the city and Magadi were interested in 'operationalising' specific pilot projects.

Thus **two** pilot projects were identified beginning in the year 2008.for a duration of 9-11months),

- o one focusing on strengthening peri urban agriculture initiatives around Magadi
- o the other focusing on strenthening citizen's initiatives in select residential areas in the city.

1. Strengthening Magadi Peri urban farmer groups on ecological agriculture through Farmer field Schools

The major objective was to improve farmer livelihoods and farming opportunities. The activities included selecting and identifying villages in a radius of 5 km where agricultural interest is high, organizing farmers into groups, identifying their needs through PRAs, widening their insights and options through Study tours. Most importantly, various stakeholders have been involved in diverse roles (farming communities), the departments, TMC officials, NGOs.

AME Foundation has been conducting season long Farmer Field Schools with the farmer groups – a participatory learning methodology well known worldwide for its focus on experiential learning, self and discovery learning and group learning principles. The farmers not only learn by doing but by sharing their learning week after week for the whole season. The curriculum includes, natural resource management, eco-friendly farming approaches, integration of various farm enterprises as well as awareness on other farm related operations like processing, preparing for markets.

2. Home Gardens in the Bangalore city in select residential areas

In Bangalore city, the resident associations are focusing on identifying interested citizens on getting trained on home gardens – in their terraces, backyards and frontyards. The focus is on helping the citizens to grow pesticide free vegetables in the limited spaces they have. Also, the citizens are being helped in recycling kitchen wastes as manure for their gardens.

Resident associations are identifying gardeners who can support citizen initiatives. Also, women SHG's are being trained on growing nurseries for citizens. Also, large self managed layouts are being identified and encouraged to take up these home gardens initiatives at individual level and possibly waste recycling initiatives at community level.

However limited in scale these efforts may be, we hope Bangalore city will setup new benchmarks in growing and consuming healthy foods, keeping environment clean, indirectly contributing in reducing 'food miles' and thereby negative impact on environment too.

This draft report deals with Home Gardens in the Bangalore city in select residential areas

1.0 Activities (as per the proposal)

- Capacity building of Garden enthusiasts
- Capacity building of Gardeners (Maalis) to help interested citizens in Gardening
- Creating linkages and training women self help groups for nursery raising
- Create small resource center with facilities and easy access to materials and implements for use by the members of the garden club
- Integrating waste reuse mechanisms at household level for productive purposes in gardening
- Maintaining 2 demonstration sites for learning and training

1.1 Proposed Timetable of the activities (as per the proposal)

Time table

Activity (in relation to Sec 6, 8, 9 and section on budget)	Frequency	Project period – April- December 2008
Awareness campaigns	Thrice	April; June; November
Trainings for Citizens	Five times	April; May; June; August; October
Trainings for Gardeners (Maalis)	Twice	Between April- May; Between June-July
Trainings for SHGs	Twice	May; June
Core Group Rev. Meetings	Thrice	April: June; Aug: Oct; Dec
Association meetings and self monitoring	4 times	Every month – April - December

1.2 Activities completed and dates

Activity (in relation to Sec 6, 8, 9 and section on budget)	Frequency	Project period – April- December 2008	Actual Achieved and dates JP Nagar – JPN; Banashankari - BSK
Awareness campaigns	Thrice	April; June; November	Twice done – 22.06.08 (JPN) 10.07.08 (BSK)
Trainings for Citizens	Five times	April; May; June; August; October	Five done ; 5.07.08, 20.09.08, 2.11.08 (JPN); 17.07.08 and 23.11.08 (BSK)
Trainings for Gardeners(Maalis)	Twice	Between April- May; Between June-July	Once (14.07.08) (combined JPN and BSK)
Trainings for SHGs	Twice	May; June	Once (14.07.08)(BSK) and two more meetings with select members
Core Group Rev. Meetings	Thrice	April: June; Aug: Oct; Dec	Many times (1.01.08, 24.01.08, 26.05.08, 13.06.08, 02.07.08, 13.08.08, 21.10.08)
Association meetings and self monitoring	4 times	Every month – April - December	Many times - Thrice with JP Nagar and fortnightly with BSK

2.0 Strategies, Achievements, Constraints

(as per proposal and some beyond)

The strategies have been evolved based on brainstorming session with member representatives of the resident associations and UH enabling team members.

2.1 Training individual citizens of Resident associations (details in annexure)

This has happened exactly as planned and sometimes more. Banashankari citizens (around 16 to 20) and few citizens of JP Nagar (MSR city layout are showing keen interest to grow their own foods. By inducing a reasonable scale, links to bio input suppliers are being negotiated.

2.2 Training urban poor as Gardeners to enable support to citizens (details in annexure)

Few gardeners have been identified and trained. This needs to be strengthened further. The 'base' of citizens requiring support' is being steadily increased beyond what was planned under the project, to enable sufficient demand for gardener's services. Gardeners/ SHG members are more active in Banashankari than JP Nagar Association area. However, big residential layouts in that area are being targeted where Gardeners will be in demand both for individual requirements as well as community spaces.

After training to SHG members, nursery is being raised by one SHG member which is being provided to citizens in Banashankari

One trained gardener has been hired by AMEF to support the Demo site as well as get acquainted with various eco-friendly options. He was a typical migrant to the city from neighbouring rural areas where he was a farmer.

Sl.No.	Trainings	Event Dates	Participants		
			Men	Women	Total
CITY PROJECT - BANASHANKARI & J P NAGAR					
Awareness Programmes					
1	Awareness Programme - J P Nagar	22/06/2008	10	13	23
2	Awareness Programme - Banashankari	10/07/2008	13	48	61
			23	61	84
Training for Citizens					
1	Training for Citizens - J P Nagar	05/07/2008	8	11	19
2	Training for Citizens - Banashankari	17/07/2008	8	19	27
3	Training for Citizens - J P Nagar	20/09/2008	3	9	12
4	Training for Citizens - J P Nagar - VIII Phase MSR City	02/11/2008	7	11	18
5	Training for Citizens - Banashankari - SQ Feet Gardening	23/11/2009	7	3	10
			33	53	86
Trainings for Gardeners					
1	Training for Gardeners - Banashankari	14/07/2008		18	18
2	Training for Gardeners - Banashankari and J P Nagar	13/09/2008	3	12	15
			3	30	33
	<i>AME Foundation Open trainings on its own (not part of the project)</i>		27	32	59

2.3 Promoting support linkages

Linkages with eco-friendly input suppliers, seed material and basic equipment are being negotiated successfully. Two options have been examined for supplying organic inputs. Prices are being negotiated to reach sufficient scale of demand for them to directly supply to citizens on a periodic basis in these select localities.

City enabling team members (Dr. Rudrappa, Dr Vishwanath) have been helpful in getting linkages with these bio input suppliers for getting inputs at a concessional price.

2.4 Promotion of Demo site

Based on the enthusiasm shown, the associations are being encouraged to maintain demonstration site. While it was planned for JP Nagar, it is Banashankari association which is poised to launch it in a big way in the month of March 2009, with possibly political support to use common areas, for productive purposes.

Another demo site is being done on AME Foundation terrace successfully. Part of the terrace has been used for different types of vegetables grown in different media, including square foot gardening concept. Part of the area under terrace garden has been covered by shade net.

From the terrace garden, in the last two months, we have harvested more than 50 – 60 Kgs of vegetables. These have been purchased by staff of AMEF, presently.

2.5 Strengthening Gender aspects

Women's participation has been considerably high as can be seen from their participation as well as follow-up action. Support of volunteers like (Ms.Vinita, Ms Soubhgya, Ms Poornima) is helping the movement.

2.6 Promoting Sustainability and scale of the model

Participation in Horticulture shows, growing interest of select layouts, discussions with entrepreneurs who want to promote home gardens in select residential layouts and apartments, blog being maintained voluntarily by Ms. Vinita (once trained and turned garden enthusiast), focusing on one or two large residential layouts in JP Nagar with their own control of common areas; large public awareness meeting planned in Banashankari, launching of independent paid terrace garden courses are being pursued for scaling up.

Besides awareness meetings in Resident associations, Dr. Vishwanath has been visiting schools to promote home gardens. In one of the schools, it was a day long programme with school children being helped to try out growing nutritional kitchen gardens.

2.7 PR Efforts/ materials

Participation in horticultural shows; development of posters; Banners for announcing trainings, flyer on home gardens (produced recently) are some of the materials/strategies being used for building the demand and interest.

Ms Vinita, one of the garden enthusiasts has volunteered to maintain a blog with expert support being provided by Dr. Vishwanath.

3.0 Liaison and Linkages

The Bangalore city based enabling team have been kept informed about the development of the pilot project. In fact, some of them have been giving support to establish linkages with eco-friendly input suppliers.

3.1 Linkages with Local officials

Local officials have been involved in their respective areas under which the resident associations operate. A big meeting with local MLA and NGOs is being planned in Banashankari to scale up the effort as well as get permission for common areas which is highly challenging.

3.2 Linkages with State political leadership and State level officials

On invitation to Chairman, AMEF, Mr. Prasad along with Dr. Vishwanath attended Chief Minister's special meeting for Bangalore Action plan and submitted note for their consideration on relevance of Urban horticulture.

Another meeting was organized with the Vice Chairman, Planning Commission and a note has been submitted in his office. On a special occasion, BBMP commissioner has visited AME Foundation office where he was appraised of the project initiatives.

Several meetings with Director Horticulture and DOA have been happening to keep them informed as well as seek their support for Magadi initiatives and seeking their support to integrate peri urban agriculture and urban horticulture prominently into main policy frameworks.

4.0 Planned Activities

4.1 A big awareness seminar in Banashankari involving citizen associations, officials and politicians for scaling up in February and March 2009

4.2 Trainings for citizens in large residential layouts in JP Nagar and Banashankari – February to April 2009

**Awareness Programme for Citizens of J P Nagar Resident Association
22.06.2008 – Sunday**

Venue : Jeevan Mitra Apartments – J P Nagar, Bangalore

Objectives and Expected Outcomes:

1. To bring in awareness about the importance of Home Gardens.
2. To bring in awareness about the importance of growing their own vegetables and fruits in the empty spaces and around and on top of their houses.
3. To inspire them to take up terrace gardens to grow healthy, fresh fruits and vegetables.

Nature of the Programme:

A lecture with a power-point presentation. It was an interactive session with question and answer by the participants.

Resource Persons:

Dr. Vishwanath B N
Dr. Shivashankar K
Mr. K V S Prasad

Mrs. Sowbhagya Sadashiva, Mrs. Sudha and Mrs. Vinita who had undergone training on terrace gardening and have been practising since then were invited to share their experiences about terrace gardening.

Mrs. Sowbhagya Sadashiva who had attended a training programme on organic gardening by Dr Vishwanath 3 years ago, brought the group large and healthy fruits from her terrace garden – sweetlime, orange, pomegranate, chakotara (pomelo)! She shared her experience of having started from scratch and showed photographs of the rich biodiversity she now nurtures on her terrace.

Mr. Sebastian, in Dr Vishwanath's words, is an innovator. He and his wife have ventured into organic vegetable gardening purely out of an interest and concern for the environment. With no formal training in this area they now grow vegetables of all kinds for their consumption, which is surely a great boon in today's scenario of inflation and rising prices! He also shared that the 2 hours that he spends everyday in the garden was a cause of envy for many gym-goers as it gave enough exercise and oxygen without having to endure noisy and polluting traffic on the roads!

Mrs. Sudha, on the other hand, shared her experience of growing an ornamental garden on her terrace. The colourful and bright flowers and lush foliage that her garden included was a treat to the eye and mind.

Finally, Dr Shivashankar summed up the discussion by sharing his personal experience of gardening, rainwater harvesting, composting by strictly following the recycle, reuse principle towards conservation of the environment.

Participants:

23 members participated in the awareness programme. 10 men and 13 women participated. We have maintained a register where we ask the participant to write their name and complete residence address along with phone, mobile numbers. All the women were housewives; some of the women were in service before and retired now. All the men are

retired from service. The average age group of the participants was above 60 and around 80 years.

Program agenda and main highlights:

The only agenda was to inspire them to take up vegetable growing in their houses (residence) highlighting the wasted space such as Terrace and balconies where they can use and grow organic vegetables and fruits.

Follow up action points and responsible persons

1. Listing the members who have shown interest in growing vegetables on Terraces
 2. Handholding them through one season
 3. If excess product comes helping them in marketing.
- Dr. Vishwanath, the association and AME Foundation will be responsible for carrying out the above action points.

TRAINING ON HOME GARDENS FOR CITIZENS OF J P NAGAR
5th July 2008 – Saturday

Venue : Mr. M A Chowdappa's Residence, J P Nagar, Bangalore

Objectives and Expected Outcomes:

1. To inspire and promote the concept of Home Gardens.
2. To inspire and promote the citizens to take up growing their own vegetables and fruits in the empty spaces and around and on top of their houses.
3. To inspire and promote them to take up terrace gardens to grow healthy, fresh fruits and vegetables.

Nature of the Programme:

A lecture with a power-point presentation. It was an interactive session with question and answer by the participants. A practical demonstration of how to mix soils, compost and other basics required for home gardens was organised.

Dr. Vishwanath explained to the participants that all of us have a gene (urge) within us for growing plants. We need only to unmask the gene.

As the programme was interactive, lot of them were eager to ask clarifications regarding growing plants on the terraces.

Participants asked questions as mentioned below to Dr. Vishwanath

1. Whether the terrace can bear the weight load?
2. Whether there will be leakage?
3. What kind of vegetables can be grown?
4. Will it be possible to grow fruits / medicinal plants etc.,
5. What we have to do to the plant waster after the crop is harvested
6. How to manage insects and diseases?

All their doubts were cleared to their satisfaction. They were also assured that they can clarify their doubts further in consultation with AME Foundation as and when they encounter problems while growing.

Resource Persons:

Dr. Vishwanath B N
Mr. K V S Prasad

Participants:

19 members participated in the training programme. 8 men and 11 women participated. All the women were housewives; some of the women were in service before and retired now. All the men are retired from service. The average age group of the participants was above 60 and around 80 years.

Program agenda and main highlights:

The only agenda was to inspire them to take up vegetable growing in their houses (residence) highlighting the wasted space such as Terrace and balconies where they can use and grow organic vegetables and fruits.

Follow up action points and responsible persons

1. Listing the members who have shown interest in growing vegetables on Terraces
 2. Handholding them through one season
- Dr. Vishwanath, the association and AME Foundation will be responsible for carrying out the above action points.

Awareness Programme for Citizens of Banashankari Association

Date :10.07.2008 – Thursday

Time :11:30 A M to 1:00 P M

The programme started with welcome by Prasad. Mr. K V S Prasad mentioned the importance of having healthy, fresh vegetables and fruits, which can be grown on our terraces and backyards.

Venue: Akshaya Credit Co-operative Society Limited, Banashankari, Bangalore

Objectives and Expected Outcomes:

1. To bring in awareness about the importance of Home Gardens.
2. To bring in awareness about the importance of growing their own vegetables and fruits in the empty spaces and around and on top of their houses.
3. To inspire them to take up terrace gardens to grow healthy, fresh fruits and vegetables.

Nature of the Programme:

A lecture with a power-point presentation. It was an interactive session with question and answer by the participants.

Resource Persons:

Dr. Vishwanath B N
Mr. K V S Prasad

Participants:

61 members participated in the awareness programme. 13 men and 48 women participated. We have maintained a register where we ask the participant to write their name and complete residence address along with phone, mobile numbers. All the women were housewives; some of the women were in service before and retired now. All the men are retired from service. The average age group of the participants was above 25 to 80 years.

Program Agenda and Highlights:

The only agenda was to inspire them to take up vegetable growing in their houses (residence) highlighting the wasted space such as Terrace and balconies where they can grow organic vegetables and fruits.

Dr. Vishwanath asked the people questions such as

Do they have a garden ? If yes, what kinds of plants are they growing ? Are you interested in growing vegetables on your terraces ?

The responses to these questions by the citizens are as below :

1. We are interested in growing plants.
2. We have grown some ornamental and some basic medicinal plants on our terraces.
3. We are interested in growing vegetables which will not only give us vegetables but also a kind of satisfaction that comes from within.
4. We also get fresh air from the gardens.

5. Children should be made to develop interest in gardening by parents. The elders should guide the children in inculcating the habit of growing vegetables.
6. Plants grown on the rooftops can make our building cool.
7. I have some space and I have grown vegetables on my own without any guidance. I need some guidance regarding do's and don'ts in gardening by AME Foundation.
8. I have grown 25 to 30 plants on my terrace. I am worried will there be any problem as leaking due to the plants. I have also grown curry leaves.
9. I was living in a village near Tiruchi and was growing different kinds of vegetables. I started growing tomatoes, brinjals, double beans in a 30 X 50 site. I have been growing drumsticks in the public place outside my compound. I have got more than 500 drumsticks till date. Unfortunately, the transformer got burnt and I had to pay a huge fine of Rs. 14,000/- for growing drumsticks. The tree was also cut by the KEB department. I feel really happy when I work in my own garden for 2 to 3 hours a day. Any kind of mental disturbance gets cooled down by working in your own garden.
10. We have the necessary space. We need advisors to give us guidance by experts who can guide us in selection of plants, compost making.

Mrs. Soubhagya Sadashiva who has been practising Terrace Gardening since a long time, who earlier got trained by Dr. Vishwanath explained to the participants how vegetables and fruits can be grown on terraces. Slide show of her garden with rare kinds of plants was shown to the participants.

Dr. Vishwanath mentioned that we can grow plants in cement pots, plastic covers and even plastic bottles and cups. By growing plants in pots has an advantage like we can carry them anywhere we shift to.

He added SHG groups can take up to nursery training. We are proposing to train Maalis (Gardeners) of Banashankari Association on 14th July, 2008. Identity cards can be issued by Banashankari Association.

He shared that he has conducted about 200 – 300 trainings. All were in the age group of 45 – 50 years. "I am happy to see the combination of young and old here".

Dr. Vishwanath mentioned 75% of the earth is occupied by insects and 25% by mammals. We are the ones who are spoiling the earth to a maximum extent. The real owners of this earth are insects. Pesticides are used for killing insects but it is really not so in reality. We are killing the environment as well as ourselves by spraying pesticides. Cotton crop being a commercial crop to get 100% yield high dosage of pesticides and insecticides are sprayed. No one can eliminate insects. Cockroaches have survived even big volcanoes. Silk is got from silk worm.

The floor was open to the Banashankari citizens for a question and answer session :

1. We have lot of space between two coconut trees. I have tried to grow vegetables and curry leaves in between coconut trees. But all the plants under coconut trees catch up insects and dry up. I have tried neem oil and other such insecticides but in vain.

Most of the plants under the coconut tree will not grow. The best plants suited to grow under the coconut tree are orchids, anthurium and other shade loving ornamental plants.

2. Can we grow plants on terraces? Will it not leak?

I suggest it can be grown on terrace. I do not suggest growing plants on terraces built by Housing Boards. However, enough care has to be taken by individual parties.

The ill-effects of pesticides reported in newspapers was highlighted.

In 5 villages of Kerala, all the children born were handicapped. In the research finding it was found that because of aerial spraying of pesticides this problem has occurred. In Punjab where cancer was high, it was found 2-4 insecticides in blood. In Tamil Nadu people were prematurely old and sterile. Pesticides' spraying has become very common in India since late 60's. Spraying of poisonous insecticides and pesticides has lot of ill-effects on human health. A book by Rachel Carson written in 1964 titled "Silent Spring". She was responsible for banning insecticides.

Dr. Vishwanath and Mr. Prasad thanked Mr. Vadiraj Shetty and Mr. Rama Raju, President of Akshaya Credit co-operative Society for organising the programme well. They mentioned that Banashankari should become a benchmark for gardening with people's initiatives.

Follow up action points and responsible persons :

1. Listing the members who have shown interest in growing vegetables on Terraces
2. Handholding them through one season

Dr. Vishwanath, the association and AME Foundation will be responsible for carrying out the above action points.

Training for Gardeners for Banashankari Association

Date : 14th July 2008 – Monday

Time :11:00 A M to 4:00 P M

The programme started with a welcome by Dr. B N Vishwanath. Mr. Vadiraj Shetty informed the participants how they can improve their financial status if they can take up maintenance of gardens for those interested, as there is a big demand for trained gardeners.

Venue : Akshaya Credit Co-operative Society Limited, Banashankari, Bangalore

Objectives and Expected Outcomes:

1. To promote the concept of Home Gardens by imparting training to Gardeners.
2. To inspire and promote the citizens to take up growing their own vegetables and fruits in the empty spaces and around and on top of their houses; even if they cannot do it all by themselves to hire Gardeners (maalis).
3. Gardeners (Maalis) to get training to maintain gardens of citizens of Banashankari and gain income.

Nature of the Programme:

A lecture with a power-point presentation. It was an interactive session. A practical demonstration was done. Each participant was given an opportunity to mix soils, compost and was given plants to plant and they have taken the pot with the plants to their respective houses to further nurture it.

Resource Person:

Dr. Vishwanath B N

Participants:

18 members participated in the training programme for gardeners. All the 18 participants were women. All the women were housewives. The average age group of the participants was above 25 and 60 years.

Programme Agenda and Highlights:

Dr. Vishwanath first explained the need for knowing about the gardens and how they can be a part of greening Bangalore. He made them do all the work - like preparation of growing media; proper way of filling the pots; how to grow nursery plants; how to use different materials for growing plants. He also demonstrated the methods of composting and vermicomposting, water management and also preparation and use of organic pesticides. He even made them take containers prepared by them and also supplied seeds of vegetables to practice.

The response was good. They wanted their SHGs to pursue authorities to allot CA sites so that they can use their knowledge to practice and earn money. They also expressed to have one more practical training to learn multiplication of plants, air layering and budding.

Mr. Vadiraj Shetty thanked Dr. Vishwanath and also promised the trainees to see what he can do to get CA sites or space in local gardens and multiply plants.

Follow up action points and responsible persons

1. Listing the members who have shown interest in growing vegetables on Terraces
 2. Handholding them through one season
- Dr. Vishwanath, the association and AME Foundation will be responsible for carrying out the above action points.

Training on Home Gardens for Citizens of Banashankari Association

Date : 17th July 2008 – Thursday

Timing : 11: 00 A M to 4 : 30 P M

The programme started with a welcome by Mr. Vadiraj Shetty.

Venue : Akshaya Credit Cooperative Society Limited

Objectives and Expected Outcomes:

1. To inspire and promote the concept of Home Gardens.
3. To inspire and promote the citizens to take up growing their own vegetables and fruits in the empty spaces and around and on top of their houses.
3. To inspire and promote them to take up terrace gardens to grow healthy, fresh fruits and vegetables.

Nature of the Programme:

A lecture with a power-point presentation. It was an interactive session with question and answer by the participants. A practical demonstration of how to mix soils, compost and other basics required for home gardens was organised.

Resource Person:

Dr. Vishwanath B N

Participants:

27 members participated in the training programme for citizens of Banashankari Association. 19 women and 8 men participated in the training programme. Some of the women (10%) were employed and have taken voluntary retirement and the maximum number (90%) were housewives. All the men have retired from service and have an interest in home gardens.

Programme Agenda and Highlights:

The only agenda was to inspire them to take up vegetable growing in their houses (residence) highlighting the wasted space such as Terrace and balconies where they can use and grow organic vegetables and fruits.

Dr. B N Vishwanath, the resource person, explained the need for Organic Terrace Gardening for vegetables. He gave a lot of examples of pesticide and fertilizer calamities on the effect of contaminating water / environment and health of all living beings in nature and also informed our contribution in reducing global warming by the way of greening terraces. He then explained step by step how to grow vegetables continuously throughout the year. Also, how to grow fruits on Terraces. He further explained how to manage water / nutrients and insects and diseases; how to manage the waste by converting it to useful compost.

Most of the participants were already growing plants but they never had guidance and all of them were ready to take up gardening provided AME handholds them in technical knowledge for one year.

The programme ended with vote of thanks by Mr Ramaraju who is already practicing gardening. He was very pleased with the training.

Follow up action points and responsible persons

1. Listing the members who have shown interest in growing vegetables on Terraces.
2. Handholding them through one season

Dr. Vishwanath, the association and AME Foundation will be responsible for carrying out the above action points.

TRAINING PROGRAMME FOR GARDENERS OF J P NAGAR AND BANASHANKARI

13th September 2008 - Saturday

VENUE: AKSHAYA CO-OPERATIVE SOCIETY, CHIKKALASANDRA, BANASHANKARI.

Objectives and expected outcome: The objectives of the program are:

1. To promote the concept of Home Gardens by imparting training to the gardeners
2. To inspire and promote the citizens to raise their own vegetable and fruit gardens in available empty spaces and also on the roof/terraces either themselves or with the help of gardeners.
3. Training gardeners to help maintain the gardens of citizens and in turn gain benefit from it as a source of income.
4. To emphasise on the need of organically grown produce, which has good implications on human health.

Nature of the program: The program started by an introduction to gardening and its significance in maintaining and raising an ecologically sustained system. It was emphasized that how the participants in a collective approach could help the city (Bangalore) in retaining its greenery. The discussion involved an introduction to effective soil management practices such as preparation of media for growing, composting and vermicomposting and also techniques to repotting techniques. The adverse effects of usage of pesticides, insecticides and also the abuse of fertilizers were highlighted.

Field demonstration: The participants were taken to Mr Ramaraju's house to demonstrate some of the effective gardening techniques to the group. A rose plant and a croton variety were identified to demonstrate the same. Practices such as grafting and other simple methods, which did not involve external inputs, were demonstrated to the group.

Resource person Dr Vishwanath B N

Facilitators: Mr Vadiraja Shetty, Mr Rama Raju, AME Foundation Team

Participants: Gardeners of J P Nagar and members of the self-help group, Sneha Mahila Samaja of Banashankari, attended the program. The group was a mix of gardeners and SHG members (women). The total number of participants was 15.

The SHG members formed the largest group comprising of 10 and they are mostly homemakers. The group mostly comprises of women of the age group 25-40 with two members who are in the age group of 50-60 years.

The gardeners were five in number, mostly employed either in some households or on contract basis at horticulture department. Out of five only two were women. Most of them were from agriculture background and have migrated to the cities to make their living.

Program agenda and main highlights:

1. To sensitise the group about the issues and heightening their awareness levels.
2. To mobilise the group towards building and tapping their entrepreneurial skills. Two SHG members have shown keen interest in growing nurseries with assistance from Mr Vadiraj Shetty, Dr Vishwanath and AME (provision of materials such as shade for

- the nursery). In total four members are willing to work outside or set up their nurseries catering to the markets given an opportunity.
3. To create a rostrum for the citizen association, SHG members and gardeners to come to a common platform. In this case the members of the association have been able to accept and welcome the initiative and cooperate in training the gardeners and employing them.
 4. To create a link between the organization, area associations and gardeners (poor communities).

Follow up action points and responsible persons:

1. To mobilize the gardeners further in enhancing their skills.
1. To maintain the enthusiasm amongst the group.
2. To understand the complexities of gender issues and livelihood options.
3. To mobilize the group further to develop their entrepreneurial skills.
4. To render technical and moral support in realizing their objectives.

Dr Viswanath, Dr Vadiraj Shetty and AME Foundation will be responsible for carrying out the above action points.

TRAINING PROGRAMME FOR CITIZENS OF J P NAGAR ASSOCIATION

20th September 2008 - Saturday

VENUE: No 17, 17th Cross. J P Nagar V Phase, Bangalore

Resource person: Dr Vishwanath B N.

Participants: The total number of participants was 12. About 75% of the group constituted women. They are mostly homemakers and 80% of them are graduates.

Program agenda and main highlights:

Agenda:

5. To sensitise the group about the ecological issues and heightening their awareness levels on home gardens.
6. To mobilise the group towards reviving the existing gardens.
7. To enthuse the participants in raising a terrace garden.
8. To establish, activate and strengthen the link between citizen associations, resource persons, organization and gardeners.

During the course of the program the, participants were introduced to discussions and field demonstration.

The discussion involved an introduction to effective soil management practices such as preparation of media for growing, composting and vermicomposting and also repotting techniques. The adverse effects of usage of pesticides, insecticides and also the abuse of fertilizers were highlighted. Emphasis on utilization of kitchen wastes was made and the method to carry out vermicomposting was dealt in detail. The group was also introduced to the concept of terrace gardening techniques with focus on growing vegetables. A basic model of terrace garden was shown with emphasis on the type of vegetables to be grown and also its maintenance. Effective pest management techniques and rotation of crops were discussed.

Dr Vishwanath demonstrated media preparation and mixing techniques with able assistance from Narasimha Murthy, who works for AME Foundation as a gardener.

Highlights of the program:

1. Hands-on training or observations from the field have created an impact on the group to pursue the activity seriously.
2. Simple techniques like effective preparation of media and integrated pest management practices has gone well with the participants and in turn will help in the program's vision of increasing greenery, eating healthy and ecological awareness.
3. The program has helped the association (JPNC) to come to a platform with its members not only getting to know about the program but also getting to know like-minded people.

4. It has created awareness amongst the group to approach and take assistance from the experts, association and the organization.
5. It has created a rostrum for the citizen association to get to know trained gardeners is available and their assistance can be availed through the organisation (AME Foundation).
6. A link has been created to connect the organization, area associations and gardeners (poor communities).

Follow up action and persons responsible:

- To maintain the enthusiasm amongst the group.
- To maintain the active link between the association, organization and the resource person.
- To mobilize the group further to implement it in their households.
- To enable the citizens by guiding them at every step and to also help them in marketing their excess produce, if achieved through their garden.

Dr Vishwanath, the association and AME Foundation will be responsible to carry out the action points stated above.

**TRAINING PROGRAMME FOR CITIZENS OF M S RAMAIAH CITY RESIDENTS
ASSOCIATION, J P NAGAR**

2nd November 2008 – Sunday

Venue: M S Ramaiah City Residents Association

Timing : 10:30 A M to 4:30 P M

Objectives and Expected Outcomes:

1. To inspire and promote the concept of Home Gardens.
2. To inspire and promote the citizens to take up growing their own vegetables and fruits in the empty spaces and around and on top of their houses.
3. To inspire and promote them to take up terrace gardens to grow healthy, fresh fruits and vegetables.

Nature of the Programme:

A lecture with a power-point presentation. It was an interactive session with question and answers by the participants. A practical demonstration of how to mix soils, compost and other basics required for home gardens was organised.

Resource Persons:

Dr. Vishwanath B N

Mr. K V S Prasad

Highlights of the Training:

Plan of a Terrace Garden was shown

1. 2 feet by 2 feet is enough for growing vegetables such as curry leaves, drumsticks, 10 –15 varieties of gourds. Each row has 10 – 15 inch pots. 1st row sow seeds and leave for a month. The plants start growing. 2nd row sow seeds after a month by the time they grow the first row will start yielding. You can plant Tomato, brinjals, Chillies, capsicum by 1 months time they will be medium sized plants by 4 – 5 months you can expect crops. We can make 3 different blocks Brinjal, Bhendi, Chillies, which is called mixed cropping. Some times even crop rotation is necessary. Plants to grown need at 3 to 4 hours of good sunlight. Every time you plant fresh seeds repotting is necessary. If you put a shade net then vegetables cannot be grown. Rectangular pots can be used for growing greens, mint and coriander.
2. A new technique called square feet gardening was introduced by having a practical demonstration. It can be adapted to our conditions as the weight on the terrace is less. If the iron rods are properly laid the terrace can bear the weight.

Planning for Terrace Gardening / Kitchen Gardening:

1. Some important points to be taken care of for having a terrace / kitchen garden. Required space, family members, topography, light, availability of certain vegetables, staggered sowing of vegetables, crop rotation, intercropping , maintains compost / vermi compost pits.
2. Portrays, plastic containers, storing boxes can be used for growing plants in hot countries. Nearly 40% to 50% plants die. In Sri Lanka they use coir powder as compost. In Israel anthuriums are grown in abundance, as they require less water.

Practical Demonstration

Pot Making, Repotting, different kinds of containers. A mixture of sand 1: mud 1: compost 2. One pot of the size of 12 inches can hold upto 8 kgs of the above mentioned composition. A gunny bag can hold upto 10 kgs.

Square Feet Gardening

1. Take a big plastic sheet, mark the area (1 sq. feet) with bricks and fill it with only compost, do not allow it for caking, 4 plants can be planted in 1 sq. feet. In Poona, gowas are grown on rooftops with this method of gardening.
2. Plants that are suitable for pot culture are potatoes, yums. Take 24 inch pots or planter box of 12 inches width. Even groundnuts, carrots and radish can be grown. For growing vegetables use 1 sand instead of 1-1/2 sand. There are two kinds sowing – direct sown crops – transplanted crops. Onions and garlic are grown in 2 ways one by transplantation the other by planting the bulbs.

Different methods of Sowing

1. Vegetable propagation, rooting a leaf cutting – Brahma Kamala, African Violet, Biconia and indoor shade loving plants – cut the leaves fresh and bury in the soil.
2. Wood Stem cutting – Hibiscus (local 3 varieties) Crotons (some).

Indoor Gardening

Crotons take in all the bad gases inside the house – when it becomes uniformly green bring it out.

Important medicinal plants

Aloe, periwinkle has properties of curing cancer, glory lilac.

Compost / Manure

1. In villages they dig a big pit in the farm and go on dumping the wastes. Nutrients are not lost. Conversion of compost to be done in anaerobic. 90% remains in compost. Aerobic decomposing the organic materials are applicable top all areas. 1/3rd parts are used for composting while harvesting that is leaves, stems and roots. We are wasting by burning which causes pollution and global warming.
2. Vegetable cutting and other household waste can be easily converted in compost and used for growing vegetables on our terraces..
3. A survey was conducted about 8 years back by Mount Carmel on organic waste which was 250 –300 gms per day. We can dig a compost pit were in we can make 3 parts – sugarcane waste – small layer at the bottom; all other organic waste go on throwing into the pit and put a layer of cow dung to control the smell of compost which is a very good medicine. In case it is anaerobic put some earth or cow dung and swab it – final layer of soil of cow dung paste. Cover it with a gunny bag, sprinkle water everyday so that sugarcane can consume enough water. For preparing vermi compost it takes 3 weeks, watering for 15 days.

Diseases

1. There are three kinds of diseases – soil borne diseases, seed borne diseases air borne diseases. The earth is covered with 75% of insects and 25% mammals. There are 4500 mammals. Human being are 1/4500 mammals who cause most of the damage.

2. Plant protection are of 4 types
Cultural method – practically removing weeds
Mechanical – Solar sterilization 6' Feet by 30 Feet trench were all the organisms will be killed if left for 48 hours.
Organic – Garlic oil spray for aphids. The yellow soaps do not have detergents effectively manage, boric power or any talc power. If sprayed on the plants the insects will die.
Chemical

Participants:

19 members participated in the training programme. 8 men and 11 women participated. Most of the men and women who participated are working having a flair for gardening. The average age group of the participants was above 23 and around 60 years.

Program agenda and main highlights:

The agenda was to inspire them to take up vegetable growing in their houses (residence) highlighting the wasted space such as Terrace and balconies where they can use and grow organic vegetables and fruits.

Follow up action points and responsible persons

1. Listing the members who have shown interest in growing vegetables on Terraces
2. Handholding them through one season

Dr. Vishwanath, the association and AME Foundation will be responsible for carrying out the above action points.

Questions and Answer session:

How to control termites?

Take a package of neem powder, search for the queen termite which a machine which lay eggs upto 10,000 per day which will be 20 feet deep inside the earth.

Can cockroaches and lizards be eliminated?

We cannot eradicate cockroaches and lizards in fact they really clean up the house.

What kind of containers can be used ?

Growing plants depends on the esthetic sense of an individual. Whatever vegetables you grow is left to your imagination. Container does not matter. A container is just a holder of the contents. If it is possible kindly visit the house of Justice Sadashivaiah where Mrs. Sowbhagya has even grown rare fruits such as pomogranate and figs on the terrace. Different kinds of containers can be used such as plastic bottles, portrays, mud pots, gunny bags.

For rain water harvesting you can contact Mr. Shivakumar of IISC who can design for you. The session closed with thanking the participants as well as Dr. Vishwanath by Mr. K V S Prasad.