

**Square foot/meter gardening:  
Micro-production of food and  
herbs for underserved populations**

Dr. Deborah B. Hill  
Department of Forestry, University of  
Kentucky

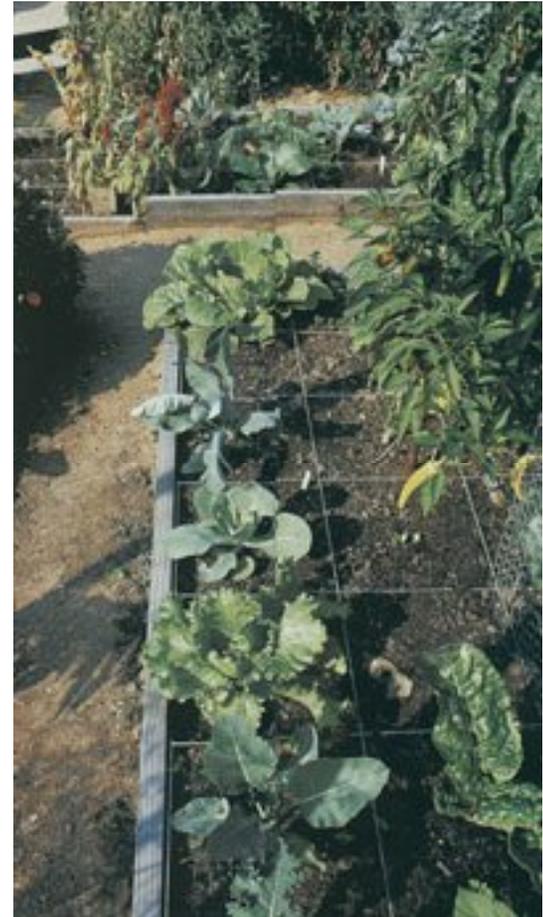
# CHILD DEVELOPMENT AND NUTRITION

- Nutritional status has a powerful influence on how infants and children develop.
- Effects extend to all areas of children's cognitive, motor and behavioral development.
- Early good nutrition helps children to grow up to be healthy and productive members of society.



# WHAT IS SQUARE FOOT/METER GARDENING?

- A simple, unique and versatile system that adapts to all levels of experience, physical ability, and geographical location.
- Grow vegetables, herbs and flowers in only 20% of the space of a conventional row garden.
- Saves time, water, work and money.

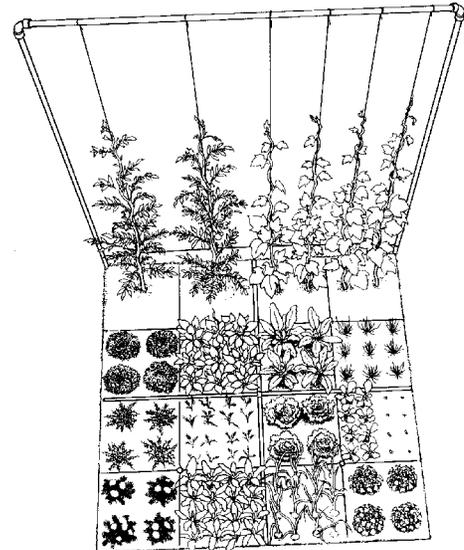


- Photo: Bob Zeidler

# HISTORY OF SQUARE FOOT GARDENING

- In the 1970s, an engineer named Mel Bartholomew devised a method of gardening that would enable people to produce enough greens and vegetables during the growing season for a family of 4 in one or more 4 x 4 foot garden(s).

Illustration: Erick Ingraham



## History

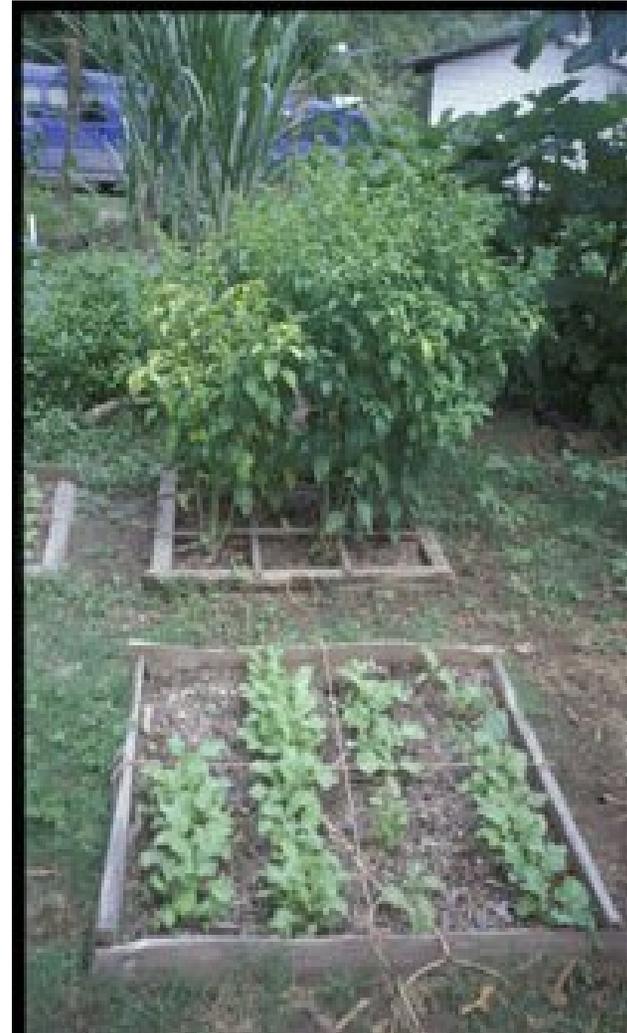
- His book, entitled *Square Foot Gardening*, is the best-selling gardening book of all time.
- The technique is so simple that everyone says, “I can do *that!*”

# History

- In the 1990s, Bartholomew became more interested in spreading the word internationally, and *square meter gardening* is the result.

# Basic Concepts: LOCATION

- Pick an area that gets 6-8 hours of sunshine daily. Most plants need this.
- Stay clear of trees and shrubs where roots and shade may interfere.



# LOCATION

- Have it close to the house for convenience and protection.
- Existing soil is not really important, since you won't be using it.
- Area around garden should have good drainage

# Basic Concepts: COMPOST

- Compost is a clean, crumbly, rich, earthy substance you can make to use as your garden soil.
- Properly made, it has all of the nutrients your plants need.



# Basic Concepts: COMPOST

- In just about a month (in the summer time) you can make your own compost.
- Pile up weeds, kitchen waste, barnyard manure (not dog or cat), dry grass clippings, leaves, etc. The greater the variety, the richer the compost.
- *Don't add fats, meats, dairy or bakery products.*
- Keep mixing in new things, turn the whole pile weekly and keep it moist.

# Process Steps: 1 - LAYOUT

- Arrange your garden in squares, not rows.
- Lay it out in 4 foot x 4 foot or 1 meter x 1 meter planting areas.



## Process Steps: 2 - BOXES

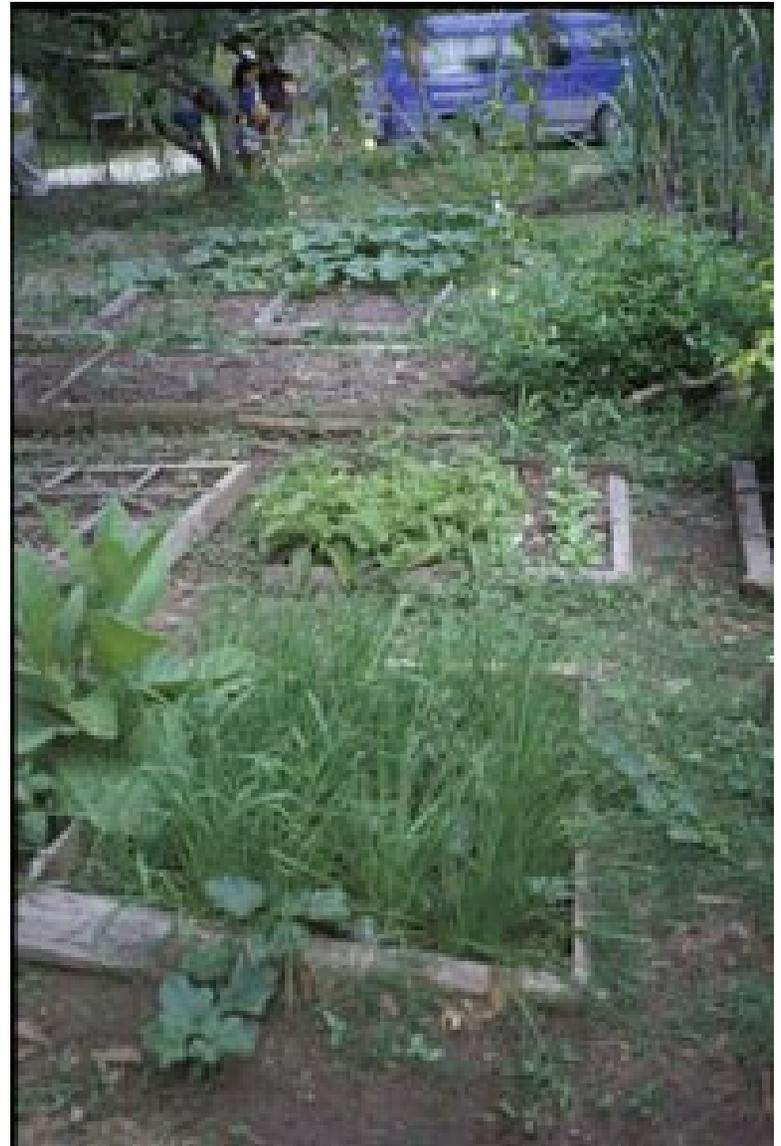
- Build boxes to hold a new soil mix or compost above ground.
- Use a solid base on concrete; use newspaper or cardboard as a base on grass or soil.
- Box sides should be:  
4 feet x 6 inches  
or 1 m x 15 cm.



## Process Steps:

### 3 - AISLES

- Space boxes 3 feet or 1 meter apart to form walking (and working) aisles.



## Process Steps: 4 - CARE

**NEVER WALK ON  
YOUR GROWING  
SOIL.**

Tend your garden from  
the aisles.



## Process Steps: 5 - SOIL

- Fill boxes with 100% compost or with a special mix of equal volumes of coarse vermiculite, peat moss and compost.



## Process Steps: 6 - GRID

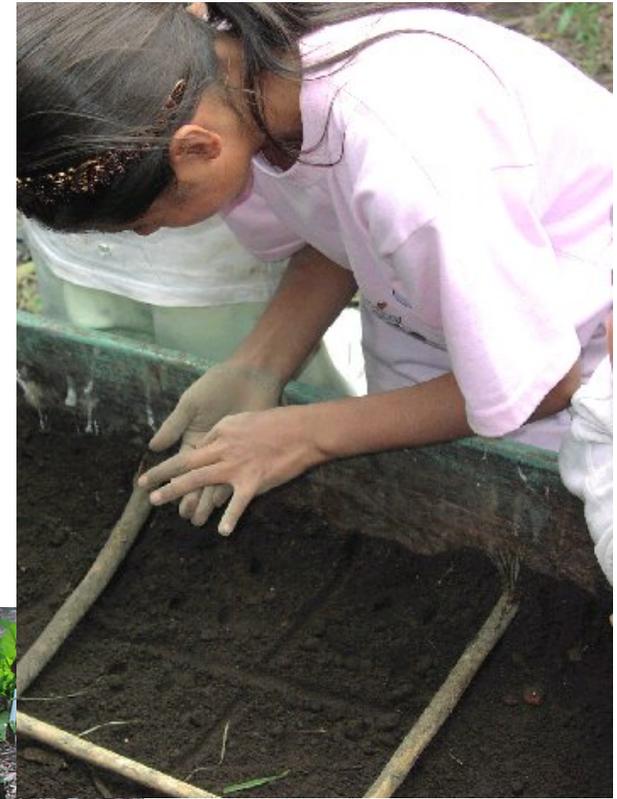
- \* Make a 1 foot (16 squares) or a 1/3 meter (9 squares) grid for the top of each box.

**A MUST!**



## Process Steps: 7 - SELECT

- Plant a different flower, vegetable, or herb crop in each square, using 1, 4, 9, or 16 plants per square, as appropriate.



# Plant spacing

## 1 per square foot

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### **Roots/Tubers:**

Potatoes,  
Sweet potatoes,  
Ginger, Horseradish

### **Leaf crops:**

Broccoli, Kale,  
Collards, Cabbages

### **Fruits/Legumes:**

Melons, Squash,  
Tomatoes, Artichoke,  
Eggplant, Cucumber,  
Okra, Peppers,  
Pumpkin

## 4 per square foot

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**Herbs:** Parsley,  
Cilantro, Basil,  
Oregano, Mint

### **Leaf crops:**

Bok choy, Lettuces,  
Chards

### **Fruits/Legumes:**

Soybeans, Fava  
beans, Drying beans,  
Corn, Strawberries

## 9 per square foot

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### **Roots/Tubers:**

Beets, Turnips,  
Garlic

**Leaf crops:** Spinach

### **Fruits/Legumes:**

String beans, Peas

## 16 per square foot

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### **Roots/Tubers:**

Carrots, Radishes,  
Onions, Green  
onions

## Process Steps: 8 - PLANT

- Conserve seeds.
- Plant only a pinch (2 or 3 seeds) per hole.
- Place transplants in a slight saucer-shaped depression.



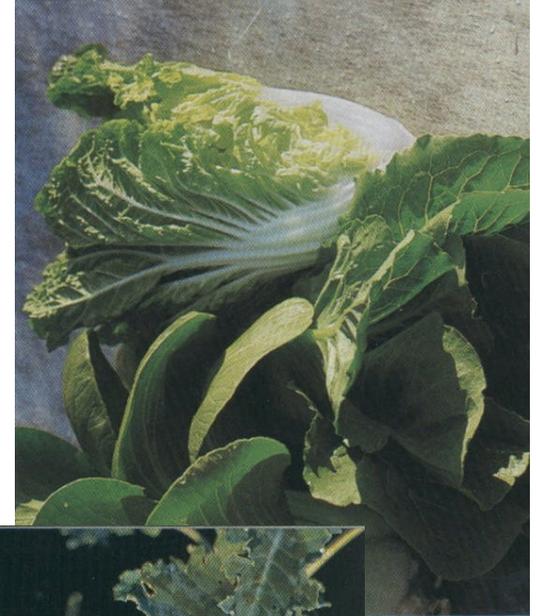
## Process Steps: 9-WATER

- Water by hand from a bucket of sun-warmed water.



# Process Steps: 10 - HARVEST

- \* When you finish harvesting a square, add compost and replant it with a new and different crop. For example, if you started with a root crop (beets), plant a leaf (lettuce) or fruit (tomato) crop next.



Photos: Bob Zeidler

# PARTNERS OF THE AMERICAS

- POA is an international grass-roots exchange program that “partners” states or cities in the U.S. with countries or parts of countries in South America, Central America and the Caribbean. It began in the 1960s during the Kennedy administration.
- Kentucky is partnered with northern Ecuador.

# **PARTNERS OF THE AMERICAS**

- Programs are designed cooperatively (north and south) in agriculture, health and medicine, education, arts, sports, civics, domestic violence prevention, etc.
- Agriculture programs in Ecuador and 6 other countries in South America and Central America have been supported by the international Farmer-to-Farmer program over the past several years.

# **PARTNERS OF THE AMERICAS**

- Northerners usually travel for 10 days to work on projects in the south in cooperation with local people.
- This is a reasonable time period for busy people to get involved in international extension efforts.



# **BUILDING A SQUARE METER GARDEN WITH SCHOOLCHILDREN**



# **BUILDING SQUARE METER GARDENS WITH VILLAGE PEOPLE**



# EXTENSION APPLICATIONS

- SFG/SMG techniques can be used in almost any situation – urban, suburban, rural – backyards, patios, balconies.
- The techniques are basic enough that people with varying levels of ability can still grow some food for themselves.
- These small gardens can be raised so that people in wheelchairs can still have access.



Illustration: Erick Ingraham

## **EXTENSION APPLICATIONS**

- SFG uses concepts of crop rotation, companion planting, and pest resistance on a micro scale, but these ideas can translate to the macro (farm) scale.
- Some people trained in Square Meter Gardening in Ecuador have begun to add more organic matter to their fields and have become more concerned with implementing the concepts of crop rotation.

# EXTENSION APPLICATIONS

- Growing one's own food brings maximum nutrients to meals.
- Growing at least some of one's own food responds to issues of *food safety* and *food security*.

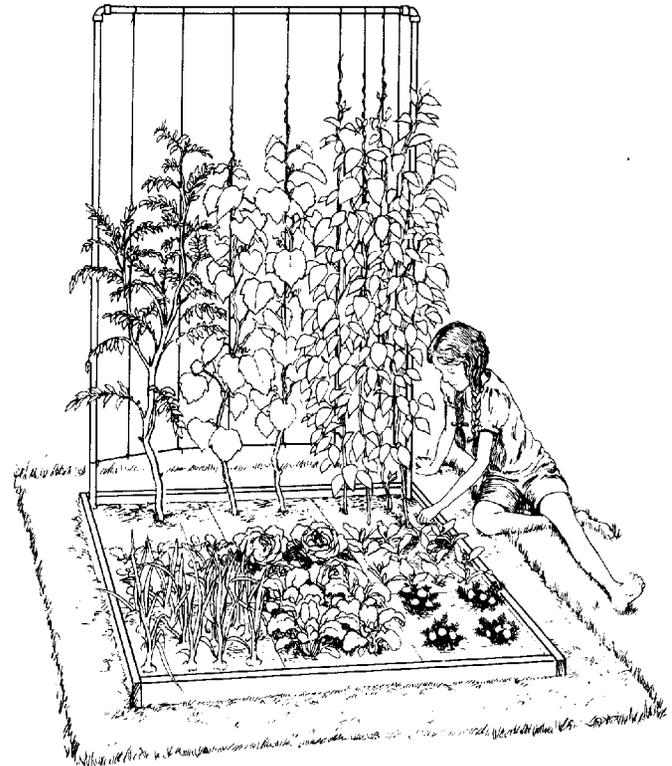


Illustration: Erick Ingraham

# EXTENSION APPLICATIONS

- Eating fresh greens and vegetables is recommended for many health issues – diabetes, weight management, heart conditions, etc.
- **HEEL** (**HHealth Education through Extension Leadership**) is a new program in Kentucky. It targets lifestyle changes for the general public to combat our most serious chronic diseases, such as diabetes, heart conditions, lung cancer, etc.

# FORESTRY APPLICATIONS

- Forest farming is one of the five *agroforestry* techniques that have been developed in many parts of the world, and that are now being used more frequently in the United States.
- Some of the most valuable plants to grow in a forest farming situation are medicinal plants such as ginseng, goldenseal, black cohosh and blue cohosh.

# FORESTRY APPLICATIONS

- SFG techniques can be used to grow medicinal/botanical annuals, and to germinate tree seeds.
- The small size of these “gardens” makes them easy to manage and easy to protect from insects, diseases, and, in the case of ginseng, poachers!

# RESOURCES

- Bartholomew, Mel. *Square Foot Gardening*. 1981. Rodale Press.
- Bartholomew, Mel. *Cash from Square Foot Gardening*. 1985. Square Foot Press.
- *Introducing Square Foot Gardening* (video). Square Foot Gardening Foundation, P.O. Box 1985, Orem, UT 84059-1985.
- Website: [www.squarefootgardening.com](http://www.squarefootgardening.com)
- Phone: (toll-free) 1-877-828-1188

## RESOURCES

- Hill, Deborah B. (CD) 2003. *Square Meter Gardening/El Huerto por Metro Cuadrados.* Steps of building a garden with pictures in English and Spanish.
- Hill, Deborah B. 2003. Compilation of materials on plant spacing, companion plants, pest resistant or repellent plants, etc. Also available in English or Spanish.