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MADE EASY

**Nutritious Organic Produce from Your
Own Garden: A Step-by-Step Guide**

by C. Forrest McDowell, PhD
& Tricia Clark-McDowell

Step-by-Step Guide for the Gardening Season

SPRING

At least 2-3 weeks before planting seeds and starts, do **SOIL PREPARATION** (Steps 1-3)

Step 1 COVER CROP — Turn into soil any that may have been planted last fall

Step 2 COMPOST (or other organic matter, i.e. garden planting mix) — add about 2-3 inches (5-7.6cm) yearly; mix into soil

Step 3 NATURAL FERTILIZERS — add appropriate amount; mix well into soil 4-6 inches (10.1-15.2cm) deep

Step 4 PLANT SEEDS & STARTS
Note: when soil is above 50F/12C

Tip #1: Try to use highest quality hybrid or open-pollinated, non-GMO seeds/starts. Why? Regional and native species have high tolerance to adverse conditions (heat, humidity, cold, pests, etc), and any harvested produce tends to store better

Tip #2: Crop Rotation — every 1-2 years rotate plants into different locations in your garden beds (wards off pests & diseases)

Tip #3: Companion Plant — different types of plants can help each other grow and ward off pests and diseases

Step 5 PROTECT & WATER PLANTS — especially seeds & young starts, at least until established

Step 6 COMPOST SYSTEM — create one if you don't have it.

LEARN HERE ...

Soil Preparation, pp. 12-13

Cover Cropping, pp. 50-53

Composting, pp. 46-49

Natural Fertilizers, pp 14-17

Spring Planting, pp. 22-23
Raising & Planting Starts,
pp. 24-25

You can create a garden based on nutritional needs, taste, favorites, storage, etc.

Crop Rotation, p. 21

Companion Planting,
pp. 18-20

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Summer & Fall/Winter Guide: Inside back cover!



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Food Policy and the Need for Change

There is a growing “Earth-friendly” revolution taking hold — the desire to have more choice and control in the foods we consume. Food gardening at home, or in a community plot, is part of a broad shift in consciousness that focuses on wellness, nutrition and self-sufficiency. Personal or community food security allows households to provide more of their food needs and/or to share their harvest with others in need.

Home food gardening reacquaints us with optimally fresh, tasty and nutritious fruits and vegetables costing a fraction of store-bought produce that is often shipped long distances. It teaches children that fruits and vegetables come from the earth, not grown in grocery stores. It inspires us to be healthwise — to remember that *we are what we eat*. Importantly, food gardening can save us hundreds of dollars a year in food expenses.

*If you want to save the Earth —
begin with the earth in your own backyard*

The Old Model

Food policy today is primarily based on creating a dependent **consumer** whose needs are determined by government, large corporations, agribusinesses, politics, and media marketing. As a result, home food production and preservation in the U.S. has declined from 35% of households in 1870 to only 1% today. Additionally (and in spite of scientific advances), people suffer from diminished health and healthcare, poor air, water and soil quality, and overprocessed, nutrient-poor foods.



Perhaps most detrimental to individuals is the loss of a heartfelt and informed connection to this Earth: its soil, water, air, habitat and species. Earth's natural resources are too often associated with commodities. As a result, people forget to live simply so that others, and this Earth, may simply live. They misplace the spirit of stewardship and generosity.

The New Model



The basic foundation of a new food policy restores informed choice as a **prosumer** — one who is empowered in their lifestyle habits and needs to be part of a broader solution to respect Earth's resources, to live within one's means, to commit to personal wellness, and to help others in need. It also brings the focus of food sufficiency to the local level — one's household, neighborhood and community. It supports local/regional family-based agriculture. Most importantly, a new food policy model restores personal confidence in knowing that we have a voice — personally, locally, nationally — in the well-being of our lives, the lives of others, and this Earth and all its resources and species.

This Book — One Small Step

It is our commitment — indeed, our hope — that this low-cost guide supports those initial steps to the journey of a lifetime: not only to know the joy of co-creating with Nature, but to experience a new level of responsibility for your own health, nutritional, and food security needs. By caring for the Earth, may you be inspired to follow the way of the hummingbird: *To sip the nectar without bruising the flower*.

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Note: To ensure optimal success, you may need to adapt techniques in this guide according to your region, growing zone, soil type & climatic conditions.



How to Use This Guide

According to the Gardening Season — Follow the Steps for each season shown in the **Inside & Back covers**. Topic locations are shown in yellow sidebar

Gardening Basics — Information is organized by topic to easily guide you. You may find it helpful to progress from front to back in this booklet

Nutrition Connection & Charts — These topics are grouped in the middle pages of this guide, pp. 28-43



Welcome to Your Food Garden!

This guide promotes an exciting new way of looking at gardening & nutrition: making conscious choices to garden so that Mother Earth is not harmed; and the vegetables & fruits you grow and harvest are ripe with nutritious value & taste for food safety and security.

Natural Gardening describes those respectful & Earth-friendly techniques (organic-based) used to enhance and maintain the overall health and productivity of the garden. We created **The Natural Garden Pyramid** and its *13 Guiding Principles* to provide both the practical and ethical foundation for your success. You will repeatedly find these 13 principles applied throughout this guide.

Benefits of Gardening

Quality Control

Optimal nutritious content of the food you eat

Saves Grocery \$

\$30-100+ monthly of fresh produce in only 100 sq ft

Bond with Nature

Creates lifelong skills for you and your family

Builds self-esteem

Food & exercise for the body, mind & spirit

Earth-friendly

Least harmful practices protect soil, beneficial wildlife, humans, pets

Community food security

allows households to meet more of their own food needs, potentially sharing their harvest with others in need

SAVE the PLANET



Plant a Seed of Hope
Respect the Earth
Harvest Your Good Efforts
~ Share ~

Our Gift to You

Our family has gardened the

same plot of land for over 30 years — our kids grew up barefoot in the strawberry patch! We began, however, by freely helping those in need in our community to grow food, herbs and flowers in raised-beds at their homes and shelters. Our nonprofit organization rallied dozens of volunteers and businesses to support our efforts.



Over the years we learned that a garden is a sanctuary — it deserves one's respect and stewardship of Nature. Soil is precious and must be reverently grown. Nutrient-rich soil preserves its microlife and helps create nutritiously rich vegetables and fruits.

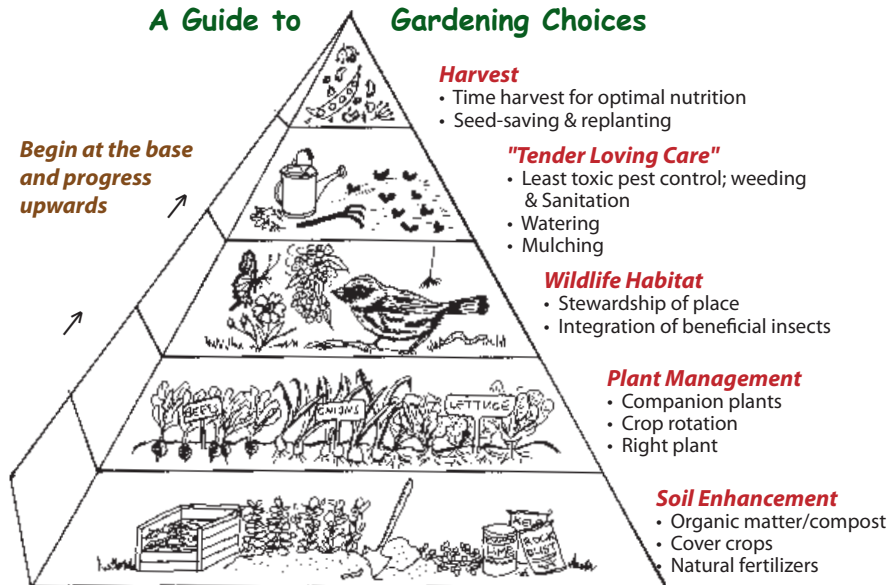
Gardening, as a favorite leisure activity, is a huge industry that is supported by both its artistic and scientific endeavors and inquiries. Our commitment

as professional gardeners, educators and writers, is to make gardening as easy to understand as possible. In our guides we strive to take out the "fluff" that fills so many gardening books. As certified Master Gardeners/Composters, we know the importance of accurate, concise information. May you do well in your gardening efforts.

May your garden give you joy and peace!

Natural Garden Pyramid

A Guide to Gardening Choices



The **Natural Garden Pyramid** depicts a cyclical process initiated by good site selection and garden design. It seeks to nurture the soil, plants, beneficial insects and wildlife, and to maintain the overall health of the garden, from initial planting to harvest. In this way, natural gardening stewardship mimics nature by promoting diversity and balance, helping to co-create, regenerate and sustain the seasonal garden drama year-after-year. Part of the purpose of this guide is to give you basic information in using the 13 Principles shown in the figure above, as they progress upward from the pyramid's broad base. These principles of plant *and* soil health are briefly explained below, and in more detail in this guide.

13 Principles of Plant & Soil Health

(Based on the Natural Garden Pyramid)

1. Enhance soil quality & microlife through regular additions of organic matter, especially compost
2. Enrich soil through the planting of cover crops (green manures)
3. Use only natural fertilizers
4. Encourage plant health & diversity through companion planting (interplanting)
5. Practice crop rotation
6. Plant the right plant in the right place at the right time
7. Create habitat space that attracts certain wildlife (birds, frogs, critters, etc.)
8. Create vegetation habitat that attracts beneficial insects for pest control
9. Use least-toxic pest control; control weeds & practice good garden sanitation
10. Water deeply at the right time
11. Use mulches to conserve water & soil moisture, discourage weeds, and protect soil microlife
12. Time harvest for optimal nutrition
13. Use highest quality open-pollinated, non-GMO seeds/starts from your region (for durability) so that you can save seeds from plants for next year



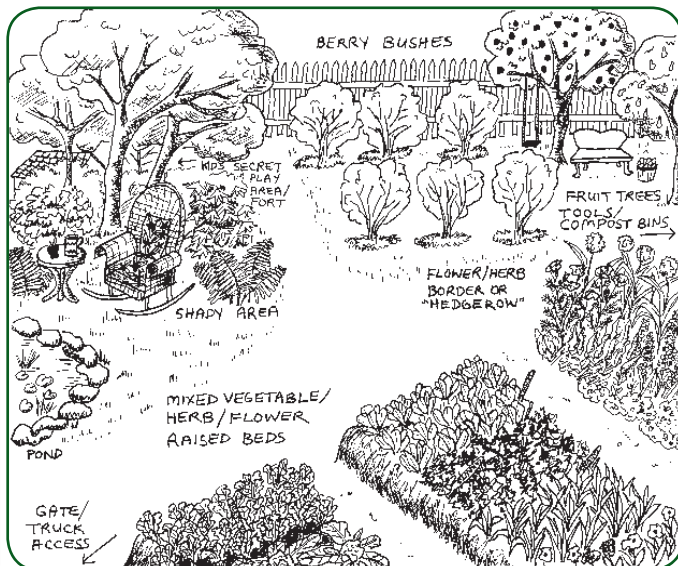
Garden Design

Carefully planning the layout and design of your food garden, whatever its intended size, is essential for success. If you have a yard, patio, or deck, it is important to know where and how you will grow your produce. If your plot is part of a community garden, you should know about various factors that may affect production. Although there is much to consider, the following strategies & tips will certainly help you create a food garden that serves your needs.

Identify Features

On paper, draw or list important features in the yard or around your food garden:

- Buildings
- Shed, greenhouse
- Fences & boundaries
- Pathways, borders
- Play areas
- Lawn or grassy areas
- Trees & shrubs
- Other plant beds
- Water sources
- Compost area
- North/South/East/West
- Gate, other access



How Much Bounty?

Your food needs will determine the size of your vegetable patch and the planting of fruits (bushes/trees/vines). Additionally, there are other options noted below.

A 100 sq ft Bounty (1-2 people)

Our research proves that growing produce in only 100 sq ft (two 4x12 foot beds) can yield from \$30-100+ per month in food, from Spring to Fall. We use all the strategies in this guide! For a small family, 200-400 sq ft (or larger) is an excellent size.

Border Bounty

Increase your yield by planting produce amidst flowers, shrubs, along borders & pathways.

Plant strawberries, lettuce, spinach, kale, cabbage, chard, parsley, radish.

Vertical Bounty

Use a trellis to increase yield. Place it in part of a bed, alongside a fence or building, or simply use a pole. **Plant pole beans, peas, cucumbers, zucchini, tomatoes.**

Container Bounty

Pots or durable containers are perfect for a deck, balcony, patio. Be creative! **Plant herbs, greens, tomatoes, peppers, spinach, strawberries, eggplant, even vines like peas or beans** that are trellissed. There are also **fruit trees** created just for growing in a pot!

Natural Environment Factors

Your food garden's yield will be affected by certain factors for which you need to plan, as discussed below. Some are beyond your control while for others you can try to develop practical strategies.



Soil

Your type of soil (sandy, loam, clay) will greatly affect growth and yield. If necessary have it tested for type & pH (page 45) and amend it regularly (**Soil Preparation**, pp. 12-13). You can also use planting mixes (bagged or bulk) especially created for vegetable gardening

Sun & Shade

Spend time in your garden at various times of the day or season. Identify sun exposure (full, part shade, shade) and length.

Plant maturity is best with at least 8 hours of full sun. Some plants (especially greens) may suffer with hot exposure, so protect them and keep soil slightly moist up to 18 inches deep.



Frost & Wind

Some areas may be susceptible to frost or wind damage. Note this in designing your garden patch. Use protective structures, create a windscreen (fence or shrubs), etc.

Garden Ethics

Your garden, whatever size, is a sanctuary. As its keeper strive to make choices that keep it safe, peaceful and beautiful.

Human Friendly.

Don't use methods that can harm.

Species Friendly.

Use least toxic/harmful strategies.

Earth Friendly.

Use, enhance & preserve Nature's resources — especially soil, water, beneficial insects & micro-organisms.

Garden Friendly.

Replenish soil, recycle waste, compost, conserve water, use regional & native, non-GMO plants/seeds, and respect the Web of Life that dwells within your garden.



Water

Drainage.

Identify low spots with poor drainage or sloping land that drains too quickly. Use raised-beds in such locations.

Irrigation. Identify water sources: faucets, sprinkler systems, rain barrels, cisterns, ponds, etc. Determine watering style: hose, overhead sprinkler, soaker hose, drip irrigation, etc.

Storage. Decide if you need/desire to catch and store water. Plan on how you will distribute it to your plants.

Conserve. Use efficient watering methods. Protect water source from poisons, etc.



Protection

Scavengers

Predators such as deer, racoons, opossums, moles, gophers, field mice, etc. need to be controlled.

Methods range from folklore to commercial. Always use the least toxic method to protect other wildlife, beneficial insects, humans and pets.

Boundary

Food security may require a fence or other means to keep out scavengers, both human & animal!

Harsh Conditions

Use protective structures, such as cloches (p. 23), garden fabrics (i.e. reemay), even an umbrella to protect certain plants from sun, heat, cold, rain, snow, etc.



RAISED-BEDS

Elevated methods of agriculture help combat heavy clay or rocky soils, poor drainage, limited space, climate, and terrain issues. In the home garden, raised-beds give a sense of order and ease in planting and maintenance. Intensive planting can also increase yield from 4-10 times over flat ground gardening.

Beyond the initial cost and time to create raised beds, you will find gardening to be easier!

Advantages

- Improved soil quality & tilth
- Very good drainage
- Requires no rototilling
- Soil warms early for Spring planting
- Year-round planting options
- Longer growing season
- Easy watering & fertilizing
- More intensive planting
- Can protect & cover
- Easy for elderly & alter-abled
- All-around easy access

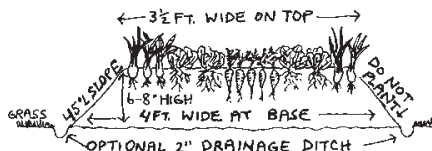
Mounded Beds

Mounded beds are simple to make and can be framed with wood or rocks later. Here's how to do it.

1. **Dig** out an area of grass or soil, say 4x12 feet (48 square feet)
2. **Add** about the same proportions of soil ammendments and fertilizers as for wood/rock beds (see chart, to the right)
3. **Slope** the sides to prevent rain & watering erosion
Bed's height will be 6-8 inches, width 3.5 feet
4. **Edge** the base regularly to keep out grass or weeds



Mounded Bed



Design Tips for Wood Beds

- No pressure treated wood or tires (poisonous!)
- Use 2x6, 2x8, 2x10 or 2x12 dimensional lumber
- **Length:** 8-12 feet is ideal (or shorter if small space)
- **Width:** 4-feet (easy reach without stepping into)
- **Height:** minimum 8 inches to 12 inches (best)

Intensive Planting

Raised-beds are perfect for **Intensive Planting** because the depth & quality of the soil is so good.

You will be amazed at how much more you can grow in the same amount of space. The most efficient way to plant is in "wide rows" (not single rows that can waste space). This sample layout (4x12 foot bed) is only 48 square feet!

