## Mittleider Gardening Method: Six Laws of Plant Growth

## Foundational Principle: A Plant Can Only Be As Productive As Its Greatest Limiting Factor

### #1: Light

- Direct Sunlight All Day Long
- Best Sun Is Afternoon Sun
- Southern Exposure
- Tall Plants on North & East
- Prune Plants For Maximum Light

### #2: Temperature

- Seed Germination: Soil Temperature 70-85 Degrees
- Seedling Production: 60-85 Degrees
- Outdoor Plants 60-95 Degrees
- Provide Partial Shade During Extreme Summer Heat
- Provide Shelter During Winter Cold

### #3: Air

- Get 3 Nutrients from Atmosphere: Carbon, Hydrogen, Oxygen
- Plants Primarily Take In Air From Their Roots
- Need Proper Soil Drainage

#### #4: Water

- Clean Water, Doesn't Have To Be Potable
- Never Sprinkle. Wastes Water & Helps Bugs, Weeds & Diseases
- Early Morning Watering Is Best.
- Keep Soil Moist Not Soggy
- A Wilting Plant Is A Dying Plant
- Level Garden Soil To Save Water
- Automate Watering

### #5: Nutrition

- J. I. Rodale, the "father" of the organic movement as the publisher of Organic Magazine, said, "A plant cannot tell the difference between nitrogen from a leaf and that from a fertilizer bag."
  - Plants Require Balanced Nutrition All The Time
  - Plants Need 13 Minerals From The Soil
  - Major Nutrients: Nitrogen, Phosphorous, Potassium (N-P-K)
  - <u>Secondary Nutrients</u>: Calcium, Sulfur, Magnesium
  - Micro Nutrients: Zinc, Boron, Manganese, Iron, Copper, Chloride, Molybdenum
  - Many Plants Have Nutrient Deficiency (Hidden Hunger) Not Disease

### #6: Competition

- Weeds: Remove Annuals & Perennials, Weed Early & Often
- Insects: Wide Bare Dirt Walkways, 3-1/2', Keep Leaves Off The Ground
- Animals: Use Effective Barriers, Fences, Etc.
- Diseases: Fast Growing, Healthy Plants, Keep Leaves Off Of The Ground











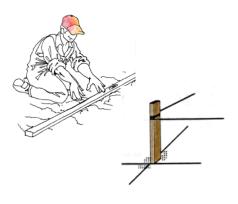


# Mittleider Method 6 Steps to Successful Gardening

## I. Choose the Location and Prepare the Soil

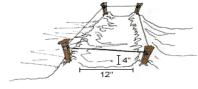
- 1. Direct Sunlight all day long
- 2. Locate a water source near the garden
- 3. Level ground slight Southern slope OK
- 4. Clean ground remove rocks & weeds
- 5. Outline perimeter with stakes & string
- 6. Fence to protect against intruders

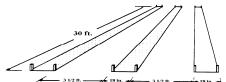




## 2. Create Soil-Beds – a Nursery – in Which to Grow Plants

- 1. Measure and stake beds 18" & aisles 3'6"
- 2. Tie strings to stakes to outline growing beds
- 3. Level beds by moving soil 1" drop in 30'
- 4. Apply Pre-Plant & Weekly Feed to beds
- 5. Dig or till beds only not aisles! 8" deep
- 6. Re-level beds, then shape with 4" ridges

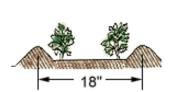




## 3. Plant and/or Transplant

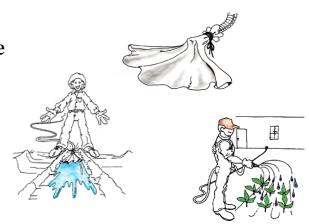
- 1. Space seeds or plants based on size at maturity
- 2. Use a marker for uniform plant spacing
- 3. Transplant healthy seedlings to extend season
- 4. Apply nitrogen to transplants for fast start
- 5. Planting seeds? Cover with sand, not dirt
- 6. Grow vertically more yield in less space





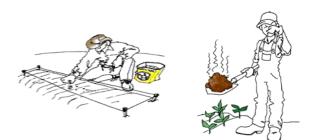
## 4. Water for Maximum Yield & Minimum Waste

- 1. Never sprinkle! Wastes water and helps disease
- 2. Early morning watering is best, but don't wait
- 3. Always keep soil moist a wilting plant is dying
- 4. Cover end of hose with cloth reduces pressure
- 5. Apply 1" of water in 10"-12"-wide planting area
- 6. Automate watering with drilled PVC pipes



### 5. Feed Accurately and Regularly

- 1. Plants require balanced nutrition all the time
- 2. Water-soluble minerals are required through roots
- 3. Pre-Plant & Weekly Feed once before planting
- 4. Weekly Feed until 3 weeks before maturity
- 5. Apply Pre-Plant 1 oz./1ft Weekly Feed .5 oz/1ft
- 6. Use sterile compost/manure if minerals not available



## 6. Control Weeds – Stop Competition, Bugs, & Diseases

- 1. Eliminate all annuals and perennials at the start
- 2. After planting, remove weeds as they first appear
- 3. Use a rake and a "scuffle" or two-way hoe
- 4. Rake ridges down and back up hoe bed & aisles
- 5. "E & O" early and often for first 2-3 weeks does it
- 6. Avoid pesticides & herbicides for healthier garden produce



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