



CROP ROTATION AND GARDEN PLANNING

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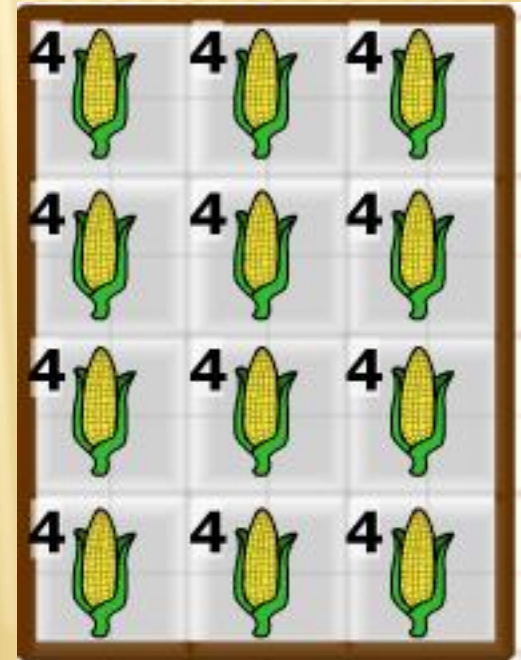
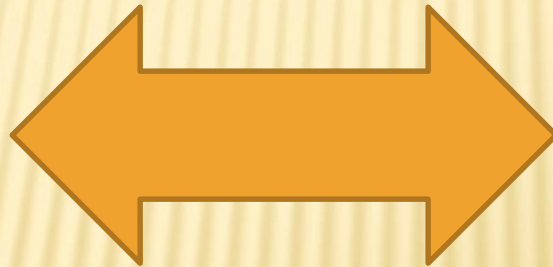
OUR PHILOSOPHY

- + Healthy soil encourages healthy plants
- + Healthy plants require fewer pesticides and fertilizers (inputs)
- + Garden with our climate not against it
- + Reduce water usage
- + Limit external inputs
- + Encourage a natural ecosystem



WHAT IS CROP ROTATION?

- ✘ The practice of alternating crop placement within the garden from season to season.



WHY IS IT NECESSARY?

- ✘ There are several benefits to practicing crop rotation:
 - + Replenish nutrients in the soil.
 - + Improve soil structure through use of green manures.
 - + Prevent the build-up of soil borne diseases and other pests.

TWO TYPES OF CROP ROTATION METHODS

✘ Balancing Soil Fertility

- + Heavy Feeders , Light Feeders and Cover Crops are alternated from season to season
- + Works Well in smaller gardens
- + Works Well Also for Gardeners that Plant Only a Few Crops

HEAVY FEEDERS

- ✘ These Crops Deplete the Soil of Essential Nutrients.
 - + Most Leafy Vegetables and Fruiting Crops are Heavy Feeders
 - + Asparagus
 - + Beets
 - + Broccoli
 - + Brussels Sprouts
 - + Cabbage
 - + Cantaloupe
 - + Cauliflower
 - + Celery
 - + Collards
 - + Corn
 - + Eggplant
 - + Endive
 - + Kale
 - + Kohlrabi
 - + Lettuce
 - + Melon
 - + Okra
 - + Parsley
 - + Pepper
 - + Potato
 - + Pumpkin
 - + Radish
 - + Rhubarb
 - + Spinach
 - + Squash
 - + Swiss Chard
 - + Strawberry
 - + Sunflower
 - + Tomatoes

LIGHT FEEDERS

- ✘ These Crops Do Not Deplete the Soil of Essential Nutrients.
 - + Most Root Vegetables and Herbs are Light Feeders
 - + Carrot
 - + Garlic
 - + Leek
 - + Mustard Greens
 - + Onion
 - + Parsnip
 - + Rutabega
 - + Shallot
 - + Sweet Potato

LEGUMES AND GREEN MANURES

- ✘ Beans Peas and Other Legumes Can Return Nitrogen to the Soil.
- ✘ Non-Legume Cereal Grains and Grasses are Incorporated into the soil to increase organic matter content and improve soil structure.

+ Alfalfa

+ Rye Grass

+ Beans

+ Sesbania

+ Buckwheat

+ Soy Bean

+ Clover

+ Vetch

+ Cowpea

+ Oats

+ Peas

TWO TYPES OF CROP ROTATION METHODS

- ✘ Disease and Pest Prevention
 - + Crops in the Same Botanical Family Tend to Suffer the Same Pest and Disease Problems
 - + Works well in Larger Gardens

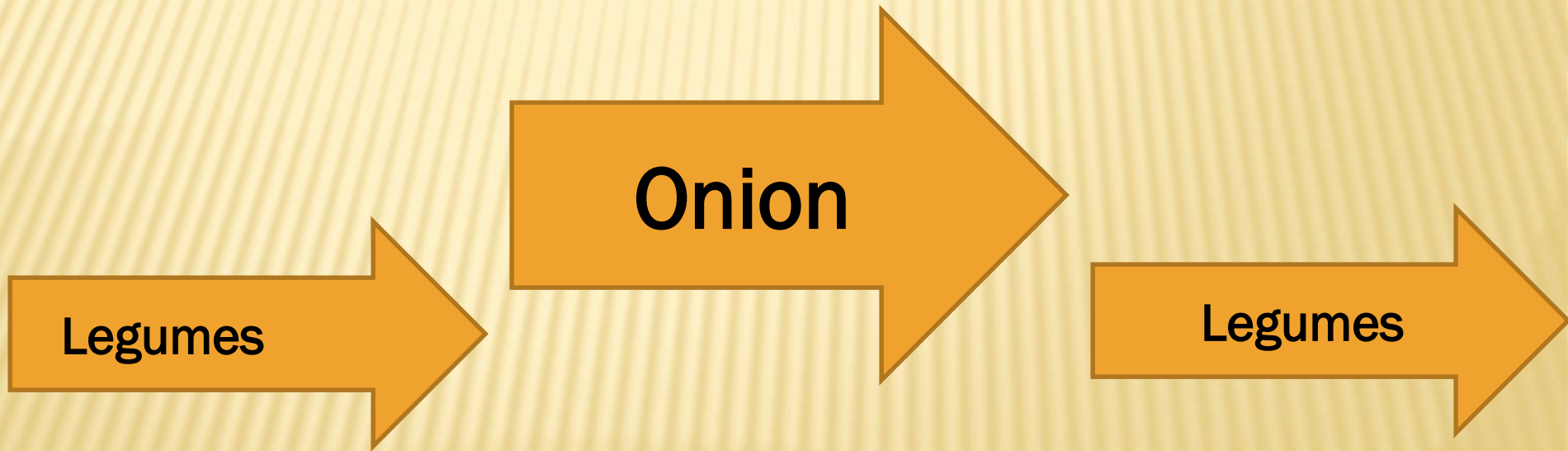
7 MAJOR PLANT FAMILIES IN THE HOME VEGETABLE GARDEN

- ✘ Alliaceae – The Onion Family
- ✘ Apiaceae – The Carrot Family
- ✘ Brassicaceae – The Cabbage Family
- ✘ Cucurbitaceae – The Squash and Melon Family
- ✘ Fabaceae – The Legume Family
- ✘ Poaceae – The Grass Family
- ✘ Solanaceae – The Tomato Family

ONION FAMILY ROTATION

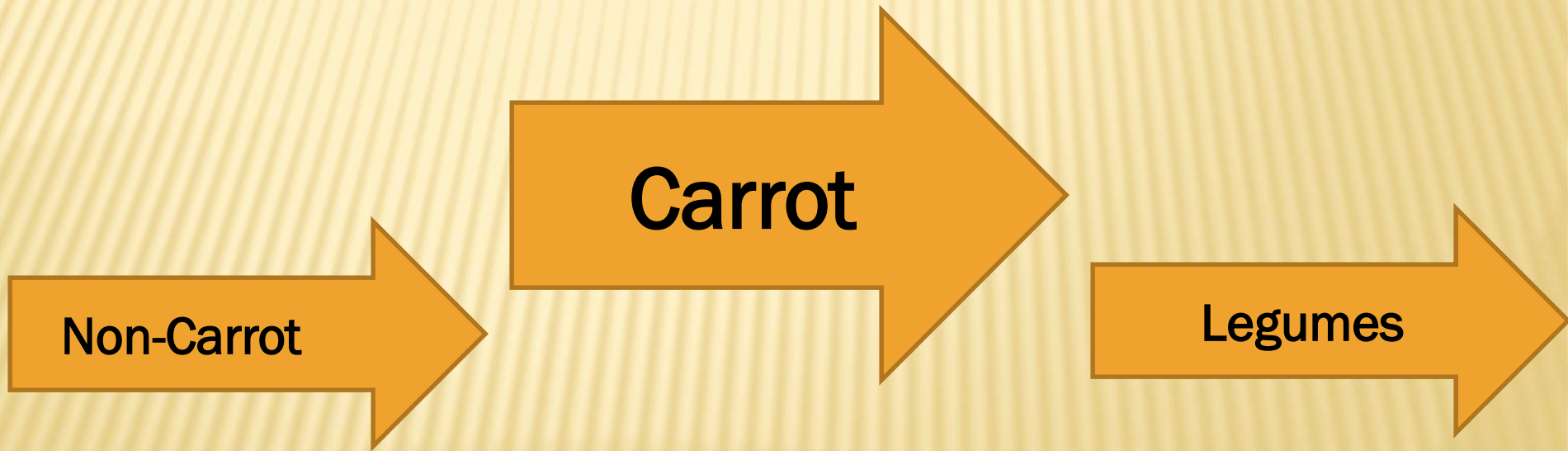
✘ Onions, Garlic, Chives

+ Avoid Planting in Soil With Undecomposed Organic Matter



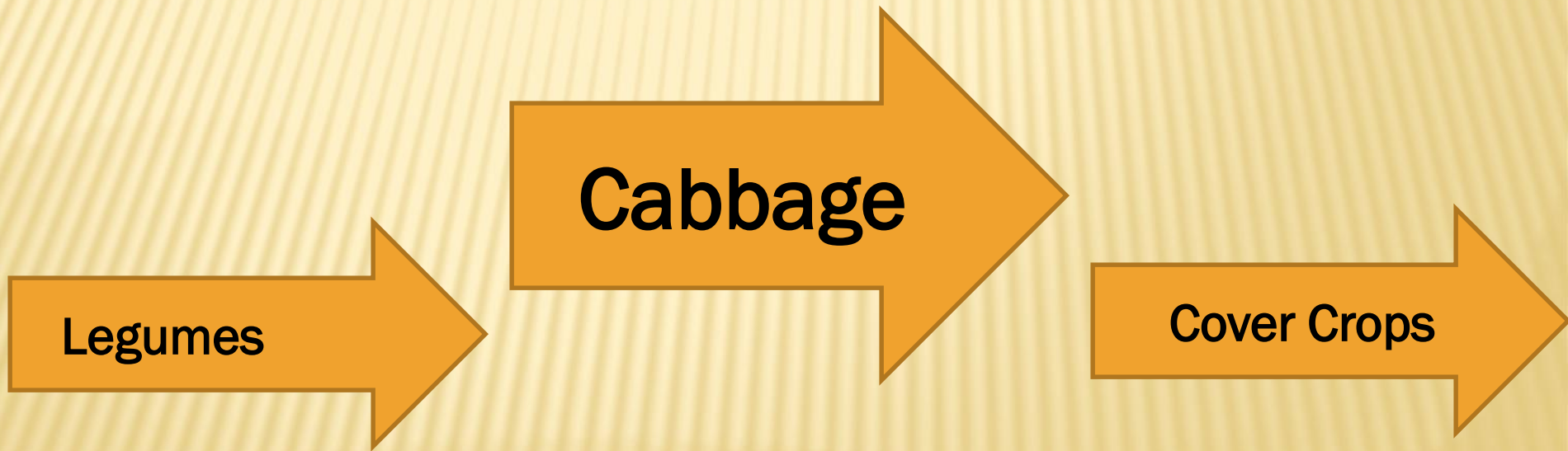
CARROT FAMILY ROTATION

- ✘ Carrots, Cilantro, Dill, Fennel, Parsley
 - + Moderate Feeders
 - + Likes Plenty of Compost



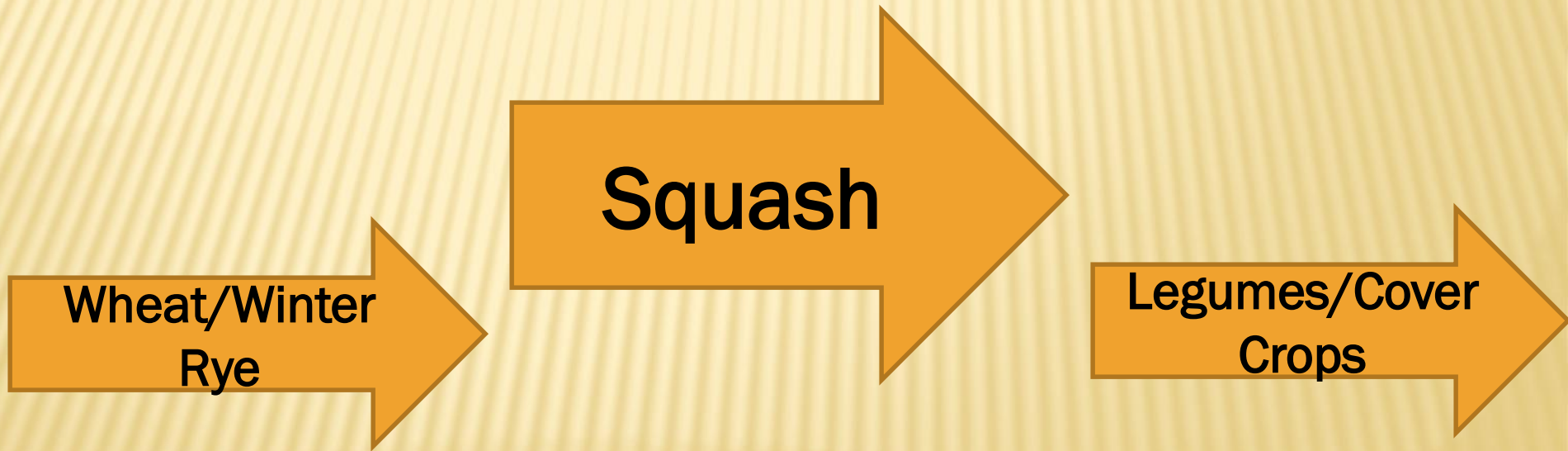
CABBAGE FAMILY ROTATION

- ✘ Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Kale, Kohlrabi, Radish, Turnips
- + Heavy Feeders, use Plenty of Compost



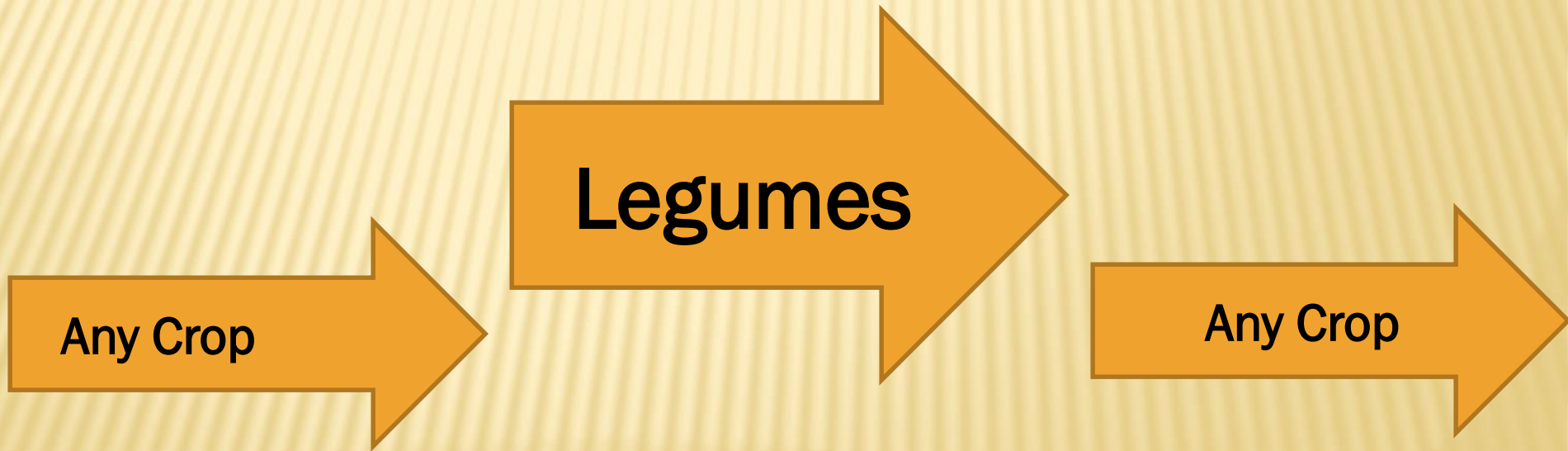
SQUASH AND MELON FAMILY ROTATION

- ✘ Cucumbers, Melons, Summer & Winter Squash
 - + Heavy Feeders, Use Green Manures for Pest Control



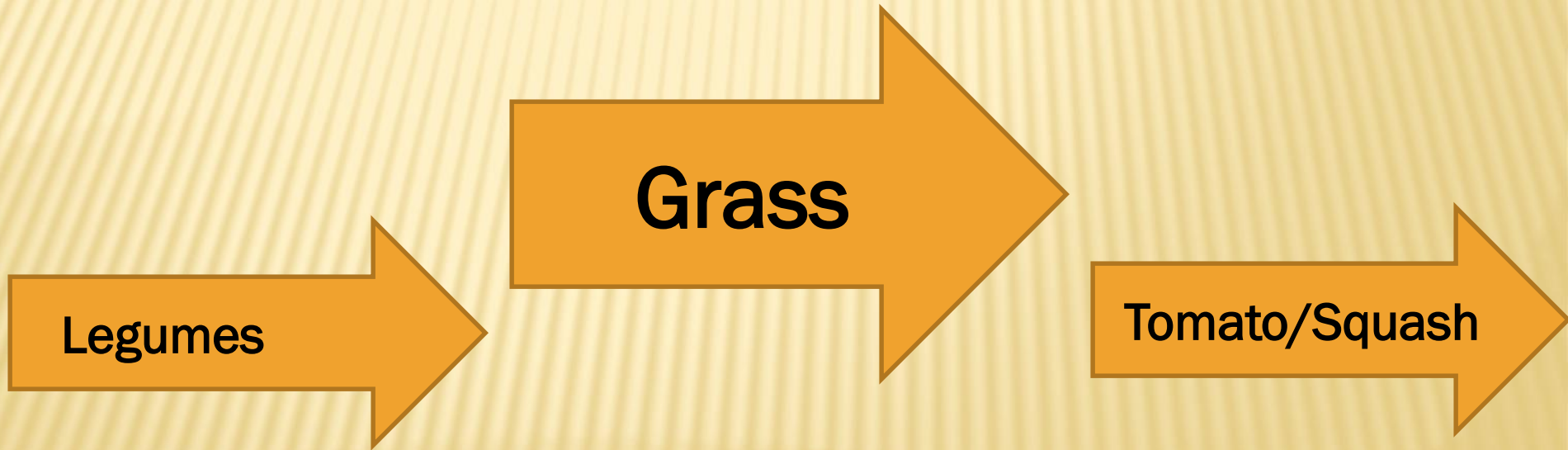
BEAN FAMILY ROTATION

- ✘ Beans, Peas, Clovers, Vetch
 - + Use to Replenish Nitrogen in the Soil
 - + Few Pest Problems



GRASS FAMILY ROTATION

- ✘ Corn, Oats, Rye, Wheat
 - + Non-Legume Green Manures Used to Improve Soil Structure
 - + Plant Before Tomato and Squash



TOMATO FAMILY ROTATION

- ✘ Eggplant, Chilies, Potatoes, Tomatoes
 - + Heavy Feeders with Many Fungal Enemies.



Cereal Grain

Tomato

Legumes

Planning for your gardening year ahead.

EXAMPLES OF CROP ROTATION SYSTEMS

TWO-SEASON PLANTING SCHEDULE:

- ✘ Spring - Bean, Corn, Cucumber, Tomatoes, Eggplant, Melon, Okra, Peppers, Squash
- ✘ Fall - Beet, Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Chard, Collard, Garlic, Lettuce, Mustard, Onion, Pea, Radish, Spinach.



Traditional

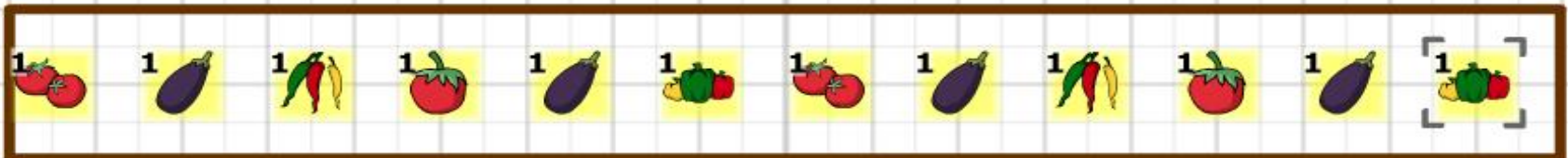
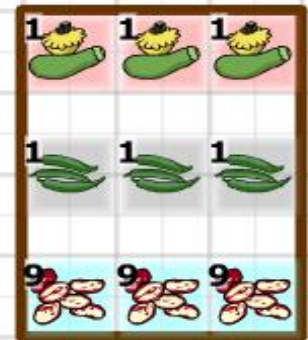
FOUR SEASON SCHEDULE:

- × **Late Winter/Early Spring:** Mid-January - Mid-March
 - + Bean, Beet, Carrot, Chard, Collard, Kohlrabi, Lettuce, Mustard, Onion Sets, Pea, Radish, Tomato, Turnip.
- × **Spring:** Mid-March - Early-May
 - + Corn, Cucumber, Eggplant, Melon, New Zealand Spinach, Okra, Peppers, Summer Squash, Winter Squash.
- × **Late Summer/Monsoon:** Mid-July - Late August
 - + Bean, Chard, Corn, Collard, Eggplant, Mustard, Pepper, Summer Squash
- × **Fall:** Early September - Late October
 - + Beet, Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Chard, Collard, Kohlrabi, Lettuce, Mustard, Onion Seed, Pea, Radish, Spinach, Turnip



Southern Arizona

WINTER / SPRING



TRANSITION TO FALL / WINTER

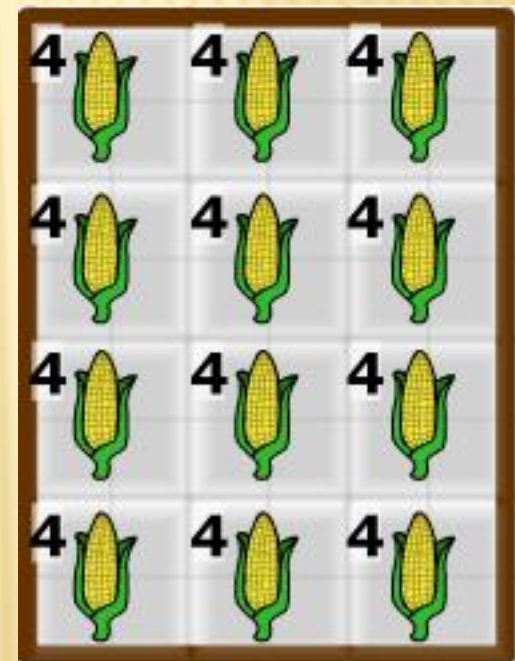


CROP ROTATION SCHEDULE BED 1

- ✘ Late winter crops followed by late summer crops



January - February



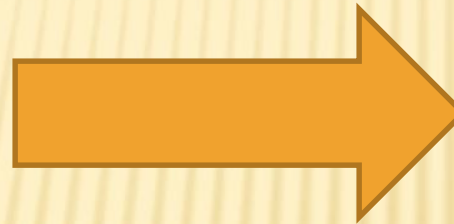
Late July - August

CROP ROTATION SCHEDULE BED 2

- ✘ Late winter crops followed by late summer crops



February – March



August - September

CROP ROTATION SCHEDULE BED 3

- ✘ Spring crops (fast growing) followed by fall crops



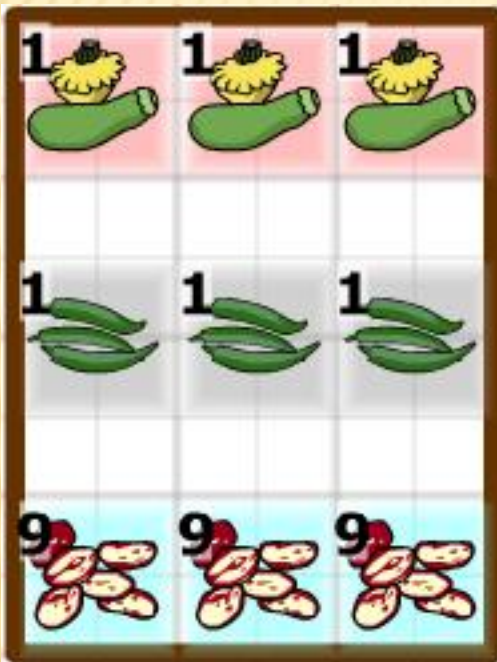
March - April



September - October

CROP ROTATION SCHEDULE BED 4

- ✘ Spring crops (fast growing) followed by fall crops



April - May



October - November

WINTER / SPRING

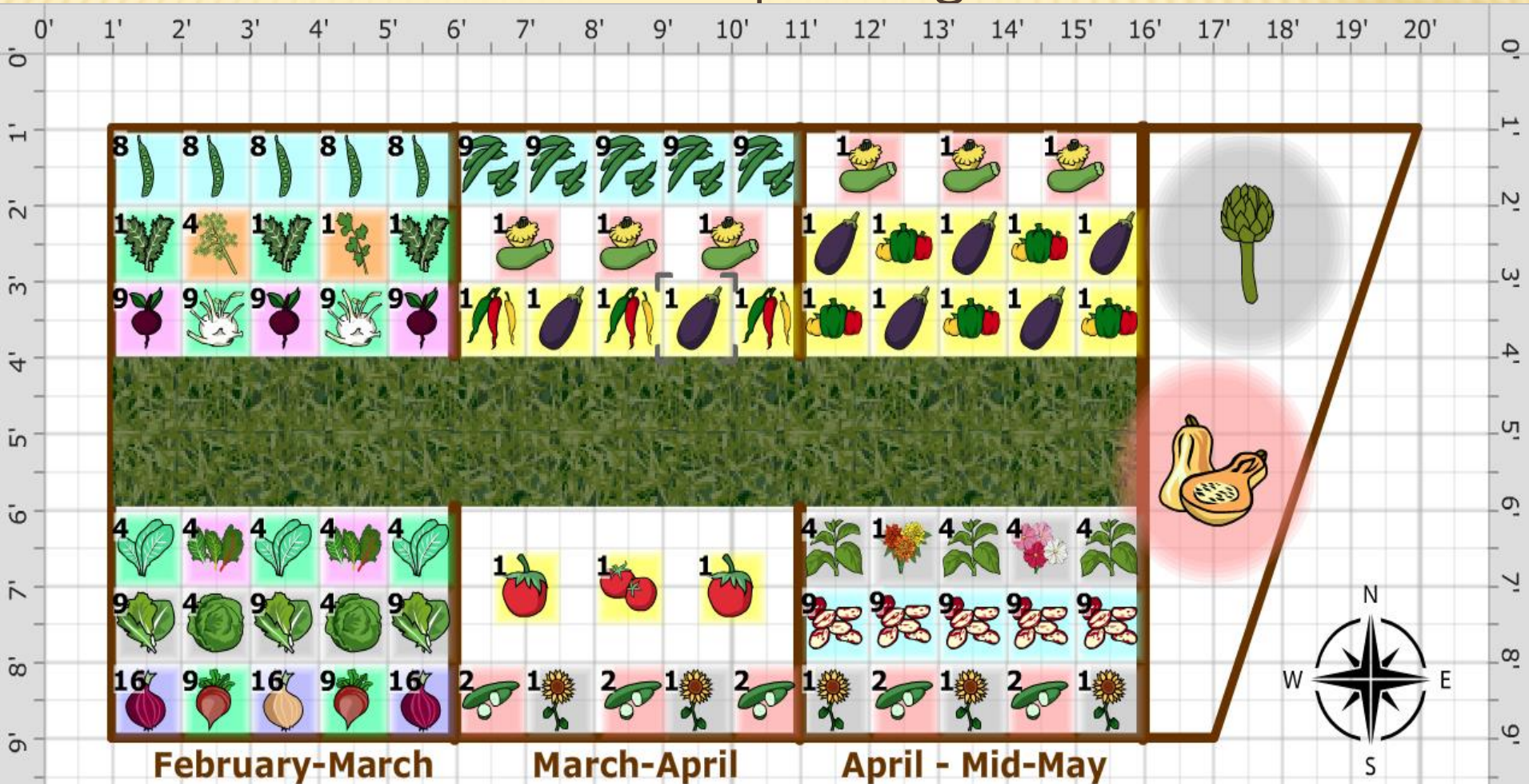


TRANSITION TO FALL / WINTER



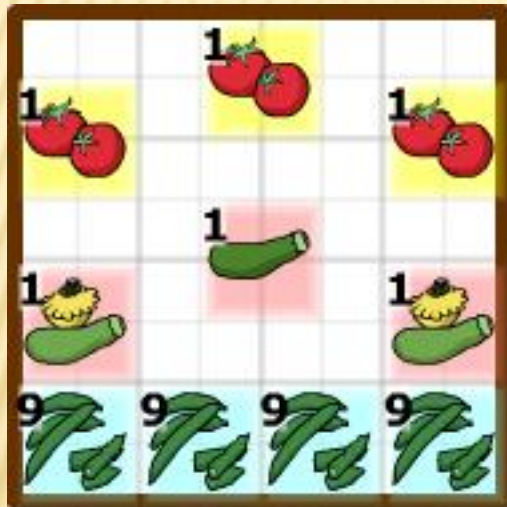
ANOTHER EXAMPLE – A HYBRID OF SORTS

- ✘ Gardens of all shapes and sizes can be divided into sections to make rotation planning easier



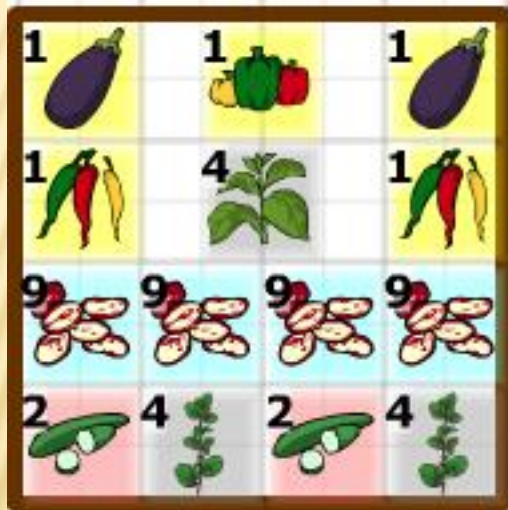
SMALL GARDEN ROTATION PLAN BED 1

- ✘ Early Spring crops followed by Late Summer crops



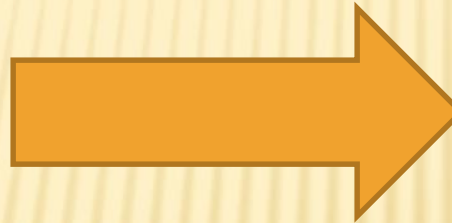
SMALL GARDEN ROTATION PLAN BED 2

- ✘ Spring crops followed by Fall crops



SMALL GARDEN ROTATION PLAN

- ✘ Early Summer crops followed by Late Fall crops



RESOURCES

- + Reading List
- + EcoGro
- + Community Food Bank
- + Gardening Clubs
- + Local Businesses
- + Friends and Family





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THE END