

Welcome to the January 2024 Presentation Companion Planting



Agenda

- What is Companion Planting
- Benefits of Companion Planting
- Why Companion Planting is Effective
- Techniques
- Combinations

What is Companion Planting

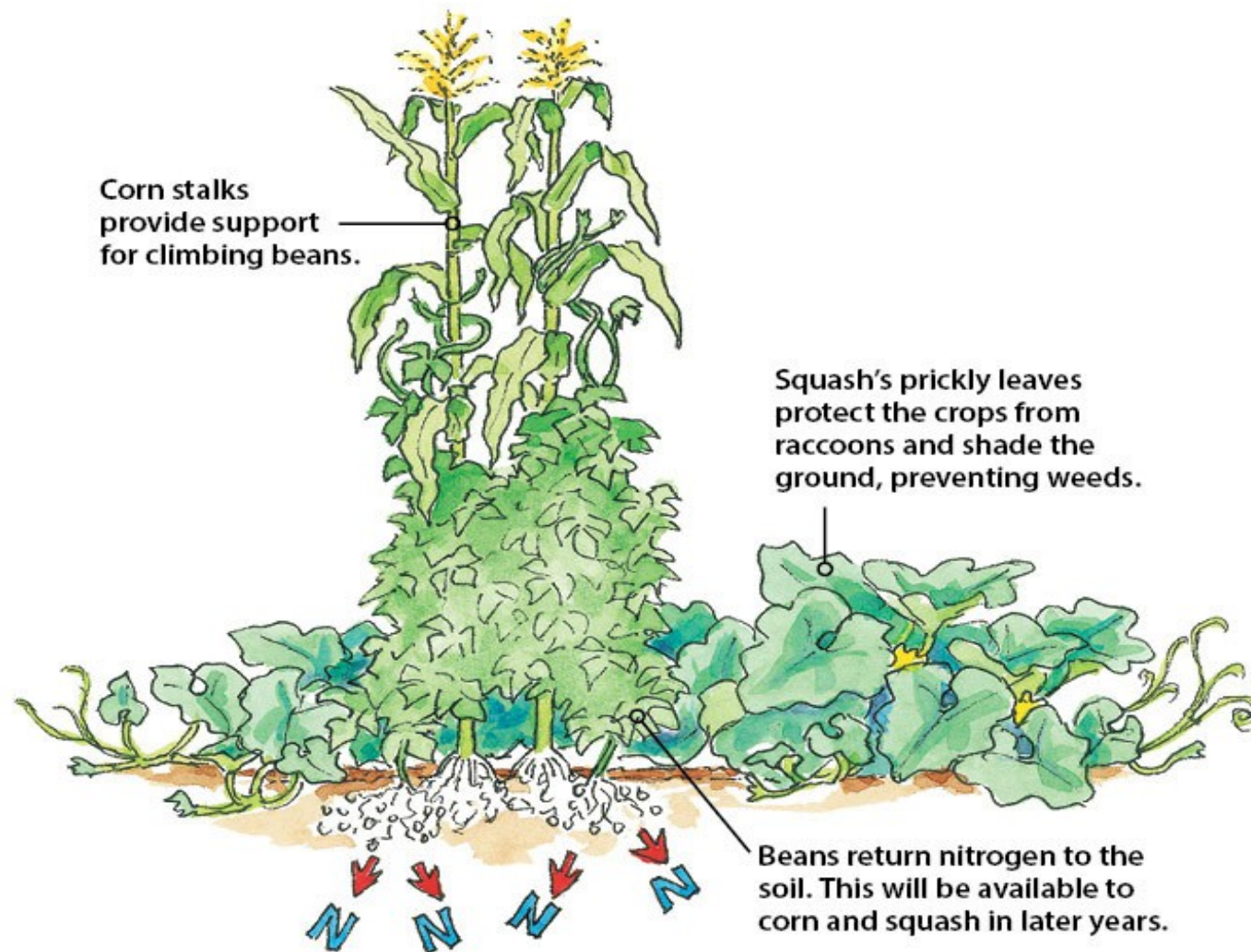
- It's the establishment of two or more plant species in close proximity so that some cultural benefit that results in higher yields is derived.
- Groups of plants which grow well together are called companions.

Origins of Companion Planting

- Traditional recommendations used by gardeners have evolved from an interesting combination of
 - historical observation
 - horticultural science, and
 - a few unconventional sources

Origins of Companion II

- Naturalists have known about the interactions among plants for thousands of years
 - About 2,000 years ago the Roman agriculturalist Varro declared "Large walnut trees close by, make the border of the farm sterile."
 - Native Americans three sisters of corn squash and beans is also an example of companion planting thousands years old

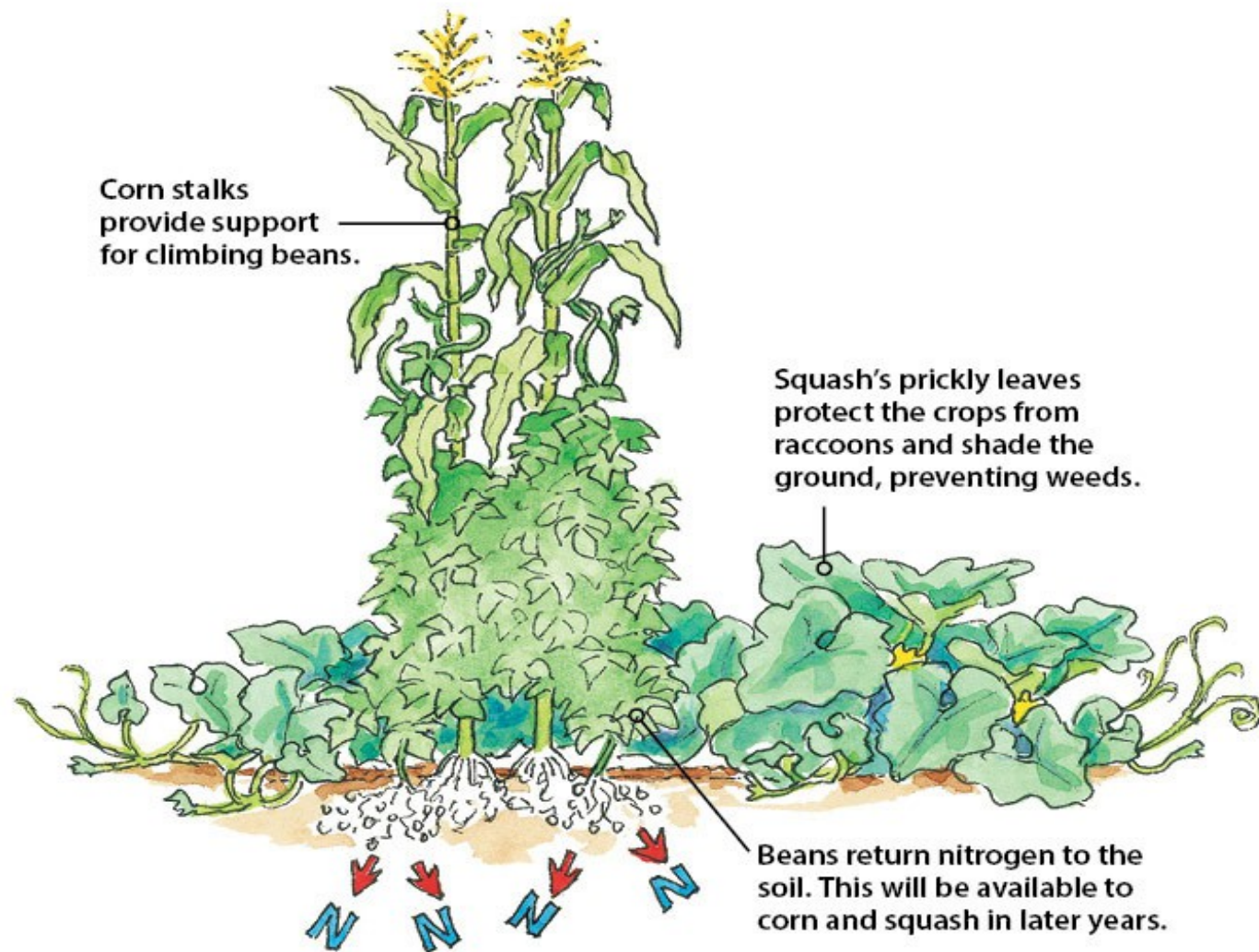


Benefits of Companion Planting

- Pest Control
- Controls weeds
- Makes efficient use of space
 - Companion plants can be planted between plants of another crop
 - Square foot gardening can be a type of companion planting
- Companion planting can reduce disease problems
 - Different species between plants can slow the spread of disease

Benefits II

- Can attract pollinators
- Some plants move ground water closer to the surface where it can be used by shallow rooted plants
 - Trees and dandelions are examples of this
 - Vining plants around other plants also conserve soil moisture by reducing the amount of exposed soil
- Can save labor
 - Reduced watering and weeding



Why Companion Planting Works

- Biochemical Pest Suppression
 - some plants exude chemicals from roots or aerial parts that suppress or repel pests and protect neighboring plants
- Symbiotic nitrogen fixation
 - legumes have the ability to fix atmospheric nitrogen for their own use and for the benefit of neighboring plants via symbiotic relationship with Rhizobium bacteria
- Adjoining plants can crowd out weeds
 - Deprive weeds of sun and other resources

Insect Crop and Herb Plants that Repels

Ants Onions, Tansy, Mint family

Aphids Chives, Garlic, Marigolds, Mint family, Dried and crushed
chrysanthemum flowers, Coriander, Onions, Oregano

Cabbage Moths Rosemary, Sage, Thyme

Cabbage Worms Tomatoes, Celery

Carrot Flies Leeks, Sage, Rosemary, Colorado Marigolds, Nasturtiums,
Flax

Potato Beetles Cucumber

Beetles Nasturtiums, Radishes, Tansy

Flea Beetles Catnip, Garlic

Flies Basil, Tansy

Leafhoppers Dried and crushed chrysanthemum flowers

Mosquitoes Basil, Garlic, Geranium (citrosa)

Onion Flies Garlic

Ticks Garlic

Tomato Worms Borage



Methods of Companion Planting

- Row intercropping
 - growing two or more crops at the same time with at least one crop planted in rows.
- Strip intercropping
 - growing two or more crops together in strips wide enough to permit separate crop production but close enough for the crops to interact.
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Methods of Companion Planting II

- Mixed intercropping
 - growing two or more crops together in no distinct row arrangement.
 - As in square foot gardening
- Relay intercropping
 - planting a second crop into a standing crop at a time when the standing crop is at its reproductive stage but before harvesting
 - Accelerated succession planting



Keep in Mind

- Companion planting is not an exact science
 - What works for one may not work for another
 - List of companion plants are based on experience of gardeners not double blind experimentation
- Physical conditions effect results
- Experiment and see what works for you

Table I

	Beans, bush/pole	Bell Peppers	Brassica-cabbage	Carrots	Corn	Cucumbers	Lettuce	Onion/Allium	Peas	Potatoes	Radishes	Spinach	Tomatoes	Zucchini/squash
Beans, bush/pole														
Bell Peppers														
Brassica-Cabbage														
Carrots														
Corn														
Cucumbers														
Lettuce														
Onion/Allium														
Peas														
Potatoes														
Radishes														
Spinach														
Tomatoes														
Zucchini/squash														

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Table II shows other companions

Table II

	Aromatic Herbs	Asparagus	Basil	Beets	Celery	Dill	Fennel	Kohlrabi	Sage	Strawberries	Sunflowers
Beans, bush/pole											
Bell Peppers											
Brassica/Cabbage											
Carrots											
Corn											
Cucumbers											
Lettuce											
Onion/Allium											
Peas											
Potatoes											
Radishes											
Spinach											
Tomatoes											
Zucchini/squash											

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COMPANION PLANTING CHART

CROP	COMPANIONS	INCOMPATIBLE
Asparagus	Tomato, Parsley, Basil	
Beans	Most Vegetables & Herbs	
Beans, Bush	Irish Potato, Cucumber, Corn, Strawberry, Celery, Summer Savory	Onion
Beans, Pole	Corn, Summer Savory, Radish	Onion, Beets, Kohlrabi, Sunflower
Cabbage Family	Aromatic Herbs, Celery, Beets, Onion Family, Chamomile, Spinach, Chard	Dill, Strawberries, Pole Beans, Tomato
Carrots	English Pea, Lettuce, Rosemary, Onion Family, Sage, Tomato	Dill
Celery	Onion & Cabbage Families, Tomato, Bush Beans, Nasturtium	
Corn	Irish Potato, Beans, English Pea, Pumpkin, Cucumber, Squash	Tomato
Cucumber	Beans, Corn, English Pea, Sunflowers, Radish	Irish Potato, Aromatic Herbs
Eggplant	Beans, Marigold	
Lettuce	Carrot, Radish, Strawberry, Cucumber	
Onion Family	Beets, Carrot, Lettuce, Cabbage Family, Summer Savory	Beans, English Peas
Parsley	Tomato, Asparagus	
Pea, English	Carrots, Radish, Turnip, Cucumber, Corn, Beans	Onion Family, Gladiolus, Irish Potato
Potato, Irish	Beans, Corn, Cabbage Family, Marigolds, Horseradish	Pumpkin, Squash, Tomato, Cucumber, Sunflower
Pumpkins	Corn, Marigold	Irish Potato
Radish	English Pea, Nasturtium, Lettuce, Cucumber	Hyssop
Spinach	Strawberry, Faba Bean	
Squash	Nasturtium, Corn, Marigold	Irish Potato
Tomato	Onion Family, Nasturtium, Marigold, Asparagus, Carrot, Parsley, Cucumber	Irish Potato, Fennel, Cabbage Family
Turnip	English Pea	Irish Potato

Questions

Thank You