

Companion Planting The Beauty & The Bullies

A Crop-by-Crop Review



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Agenda

- Resources are important!
- What is Companion Planting?
- What else do you need to consider?
- Information Tables
- Crop Review
- Garden Bullies
- Q&A

References

Because good sources matter!

1. *Great Garden Companions* by Sally Jean Cunningham, Master Gardener, Cornell Cooperative Extension
2. *Carrots Love Tomatoes* by Louise Riotte
3. University of Minnesota Extension <https://extension.umn.edu/planting-and-growing-guides/companion-planting-home-gardens>
4. University of West Virginia Extension <https://extension.wvu.edu/lawn-gardening-pests/gardening/garden-management/companion-planting>
5. Penn State Extension <https://extension.psu.edu/programs/master-gardener/counties/susquehanna/penn-state-master-gardener-articles/good-neighbors-make-good-gardens-companion-planting>
6. Cornell University Extension <https://extension.unl.edu/statewide/lincolnmcpherson/Cornell%20Guide%20to%20Companion%20Planting.pdf>
7. Montana State University Extension <https://www.montana.edu/extension/broadwater/blog-article.html?id=18786>
8. University of Florida Extension https://sfyl.ifas.ufl.edu/sarasota-docs/ag/OrganicVegetableGardening_CompanionPlanting.pdf
9. *Garden Insects of North America* by Whitney Cranshaw and David Shetlar

What is Companion Planting?

The Wildlife Gardening Forum defines Companion planting as “the growing of different plants species close together for expected benefits in productivity through pest control, pollination, boosting fertility, and creating optimum growing environments.”

http://www.wlgef.org/companion_planting.html

What is Companion Planting?

The most classic example is the Three Sisters technique that originated in Mesoamerica.

- Corn - pole & cover
- Pole beans - nitrogen fixers
- Squash - ground cover & repellent

What is Companion Planting?

- It is a mix of crops, herbs & flowers
- Advantages include:
 - **Pest control**
 - **Pollination**
 - **Boosting fertility**
 - **Creating optimum growing environments**

What else do you need to consider when planning?

Before you start

- Crop rotation
- Feeding your soil
- Watering plan
- Location / sunlight

Advanced Planning

- Ground covers
- Intercropping
- Cover crops
- Trap crops

Sample Row Plan

Bed	Plan Neighborhood	Crop	Rotation	Companion Herb	Companion Flower	Companion Ground Cover	Perenial Herbs	Annual Herbs
1	Squash - Winter	1 Hill Gourds 1 Hill Pie Pumpkin 5 Hills Spaghetti Squash	3 Years	Dill	Borage, Nasturtiums, sunflowers	Straw		Dill
2	Roots & Greens	Carrots & Cut Flowers Backfill w Sweet Potatoes	2 Years	Caraway, dill, fennel	Chamomile, Cleome, Cosmos, short Aster	Grass Clippings, Sweet Allysum	Fennel	Caraway / Dill
3	Tomato	Hot Peppers & Shishitos Cut Flowers	4 Years	Caraway, dill, fennel	Chamomile, Cleome, Cosmos, short Aster	Grass Clippings, Sweet Allysum	Sage	Zinnia
4	Squash - Summer	Snow & Sugar Snap Peas First! Squash - Summer Crook Neck & Green Zuchinni	3 Years	Dill	Borage, Nasturtiums, sunflowers	Straw		
5	Roots & Greens	Garlic	2 Years	Basil, Parsley	Cleome, Cosmos, Tall Aster	Black Plastic or Clover		Cosmos
6	Potato	Potatoes	3 years			Straw	Oregano	
7	Tomato	Tomatoes	4 Years	Basil, Parsley	Cleome, Cosmos, Tall Aster	Black Plastic or Clover		Basil Parsley
8	Tomato	Peppers	4 Years	Caraway, dill, fennel	Chamomile, Cleome, Cosmos, short Aster	Grass Clippings, Sweet Allysum	Sage Oregano	Zinnia in the middle

Carrots & Scallions



Photo by Katie Conaway

Crop Companions:

- Onions & leeks
- Tomatoes
- Peas

Flower Companions:

- Calendula, chamomile, daisies

Herb Companions:

- Caraway, coriander, sage
- They dislike dill



Photo by Katie Conaway

Peppers & Zinnias

Crop Companions:

- Other members of the tomato family, tomatoes, eggplants

Flower Companions:

- Marigolds
- Cosmos
- Tall aster family flowers

Herb Companions:

- Coriander
- Fennel
- Basil



Photo by Katie Conaway



Photo by Katie Conaway

Peppers & Zinnias

And other flowers for bouquets



Photo by Katie Conaway

Peppers & Zinnias



Photo by Katie Conaway

Peppers & Zinnias



Photo by Katie Conaway

Cucumbers (Introverts!)

Crop Companions: Cabbage, radishes and leafy greens.

Flower Companions: Nasturtiums and marigolds.

Herb Companions: Cucumbers do not like aromatic herbs.



Photo by Katie Conaway



Photo by Katie Conaway

Potatoes & Green Beans

Crop Companions: Potatoes, beans & peas, cucumbers and strawberries. No onions.

Flower Companions: Calendulas, cosmos, daisies

Herb Companions: Dill, rosemary



Potatoes & Green Beans



Photo by Katie Conaway

Potatoes & Green Beans



Photo by Katie Conaway

Flea Beetle damage on potato leaves,
even though they are right next to sage.

Potatoes & Green Beans

Don't forget to add your flowers and herbs into your space requirements.



Photo by Katie Conaway



Photo by Katie Conaway



Photo by Katie Conaway

The Mexican bean beetles still found the green beans despite being surrounded by marigolds.



Squash

Crop Companions: Three sisters - squash, corn & pole beans
Icicle radishes

Flower Companions:
Nasturtiums, marigolds and sunflowers

Herb Companions: Dill



Photo by Katie Conaway



Photo by Katie Conaway

Squash

Marigolds
and
nasturtium



Photo by Katie Conaway



Tomato & Asparagus

Crop Companions: Leafy greens, tomatoes, asparagus, and carrots grow well together.

Flower Companions: Cleome, cosmos, Queen Anne's lace, tall asters, sweet alyssum

Herb Companions: Basil, parsley, marigolds



Photo by Katie Conaway

Tomato & Asparagus



Photo by Katie Conaway

Tomatoes recently liberated of lower leaves to allow the plant to breathe, reduce disease spread and to give the basil room to grow.



Photo by Katie Conaway

Tomato & Asparagus

Parsley (left) and
Basil (right) both
do well if given
access to light.



Photo by Katie Conaway

Tomato & Asparagus

Thai basil on left

Genovese basil
on the right



Photo by Katie Conaway



Photo by Katie Conaway



Photo by Katie Conaway

Tomato & Asparagus

Corn earworm or
tomato fruitworm on
right.

Yellow garden spider
on the left.



Photo by Katie Conaway

Sweet Potatoes

- Crop Companions: Potatoes, runner or pole beans and radishes
- Flower Companions: White hellebore
- Herb Companions: Basil, Dill and strong aromatic herbs



Sweet Potatoes



Freshly dug sweet potatoes, surrounded by Sweet Alyssum.



The dill has made it above the vines here, so it will thrive.



Leafy Greens



Photo by Katie Conaway

Crop Companions: Lettuce and brassicas go well together along with carrots and onions.

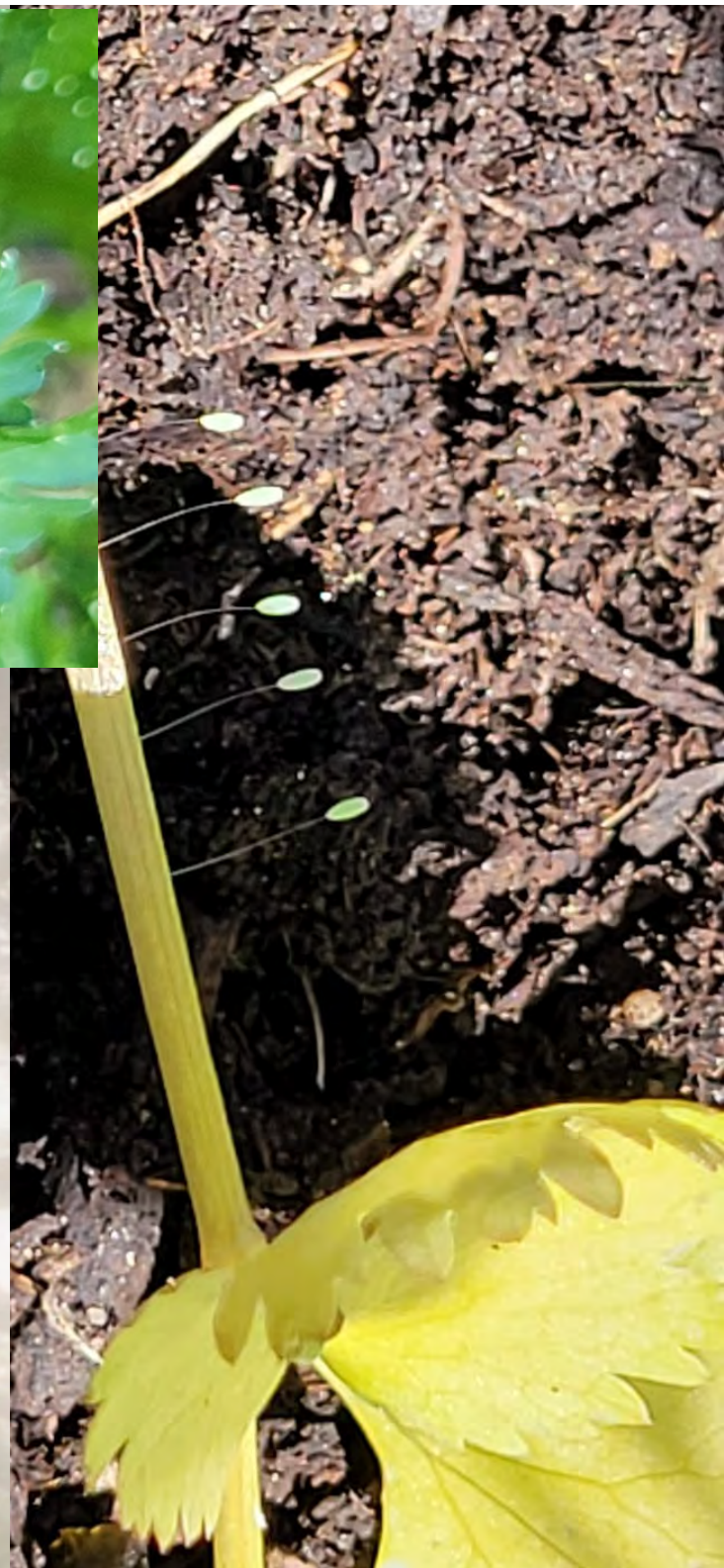
Flower Companions: Short varieties of asters and cosmos

Herb Companions: Dill, fennel, caraway and chamomile

Leafy Greens

The leafy green nemesis - harlequin bugs!





Leafy Greens

Left: Variegated
fritillary chrysalis on
Swiss chard

Top: Swallowtail larva
on parsley (parsley
worm)

Right: Green Lacewing
eggs on cilantro

Garlic

Crop Companions: Most crops except beans and peas





Garlic

- The garlic bed is open by the end of June.
- Either let the companion flowers go wild (pictured!)
- Or work on intercropping with a fall crop that can be started in July.

Onion & Cosmos



Crop Companions:
Cabbage, beets,
strawberries,
tomatoes and
lettuce.

They do not like
peas and beans.

Flower Companions:
Cosmos & asters
(short!)

Herb Companions:
Dill, fennel,
caraway, chamomile



Sugar Snap & Snow Peas

Crop Companions:
Potatoes, beans, carrots
and corn
Does not go with onions
or garlic

Flower Companions:
Asters, calendula,
cosmos, marigolds

Herb Companions: Dill,
rosemary, sage, thyme



Photo by Katie Conaway



Photo by Katie Conaway

Sugar Snap & Snow Peas

Intercropping example



Photo by Katie Conaway

Strawberries, Blueberries, Thyme & Scallions

Crop Companions: Strawberries, blueberries, and scallions

Flower Companions: Borage (in moderation), white hellebore, marigolds

Herb Companions: Thyme, dill, coriander, fennel



Photo by Katie Conaway



Photo by Katie Conaway

Raspberries (Bullies!)

- Companions are difficult for this
- Do not plant near blackberries
- Do not plant red varieties near purple or black raspberries





Raspberries

- Stink bug eggs
- *Phidippus clarus* (Brilliant Jumping Spider) found in the same area



Garden Bullies

Sunflowers, Cone Flowers, Oregano
& Sage



Garden Bullies

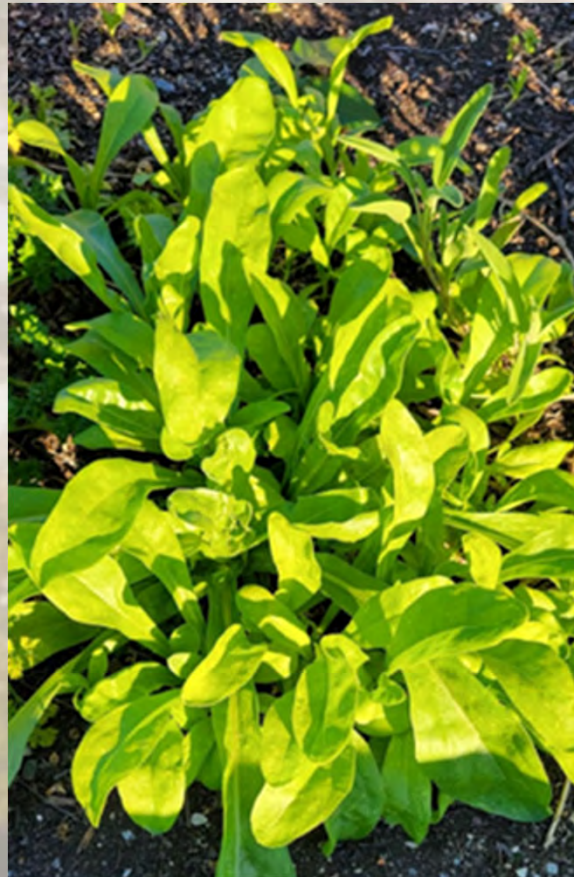
Horseradish & Chamomile



Photos by Katie Conaway

Garden Bullies

Calendula



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Garden Bullies

Borage



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In the end, it is beautiful!

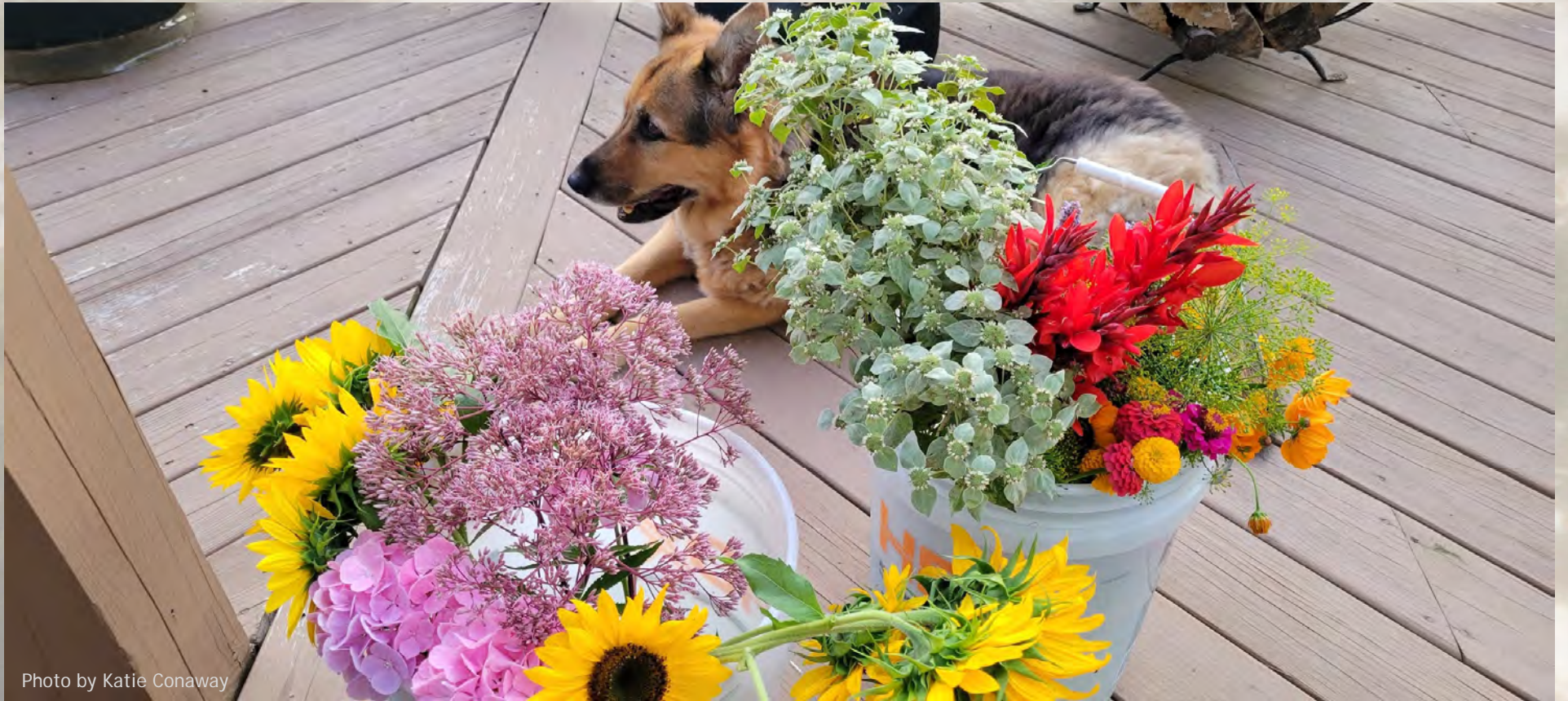


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Q & A



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