

# INTERPLANTING FOR PEST CONTROL Science Page

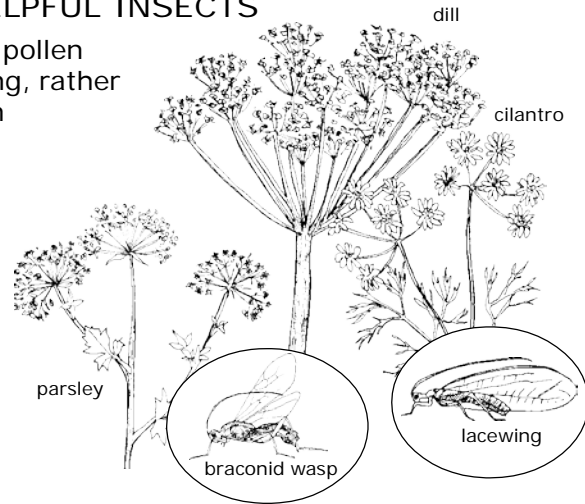
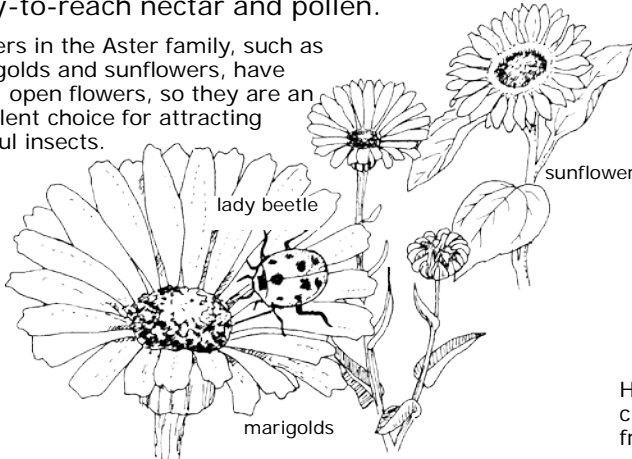
Interplanting is growing one kind of plant alongside a different kind of plant. Some plants attract helpful insects. Other plants confuse or

repel insect pests. When these plants are interplanted, they can help protect your crops from insect pests.

## INTERPLANT TO ATTRACT AND SHELTER HELPFUL INSECTS

Most insects that eat insect pests also eat nectar and pollen from flowers. They have short mouth parts for chewing, rather than long tubes for sipping, so they need flowers with easy-to-reach nectar and pollen.

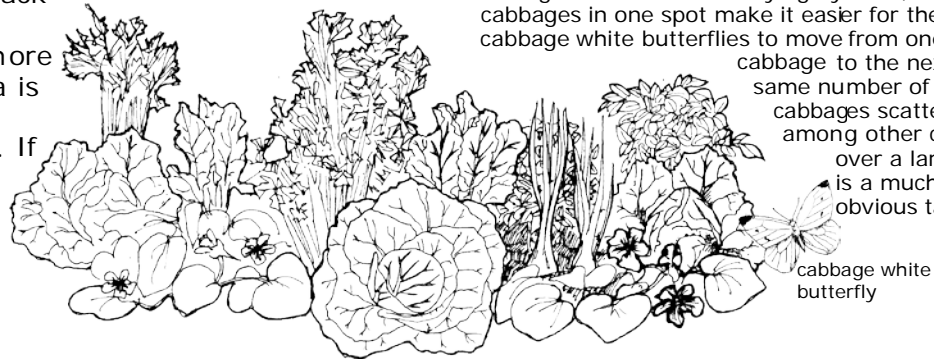
Flowers in the Aster family, such as marigolds and sunflowers, have wide, open flowers, so they are an excellent choice for attracting helpful insects.



Herbs like parsley, dill, and coriander have flat-topped clusters of small flowers. They also have strong fragrances that attract beneficial insects.

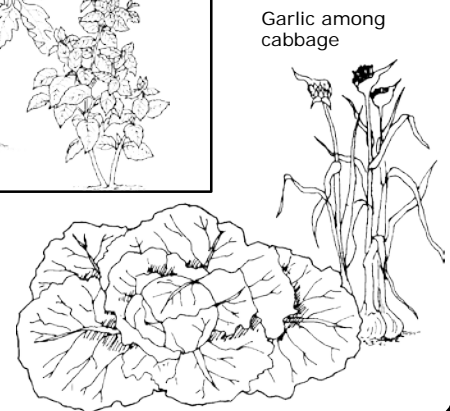
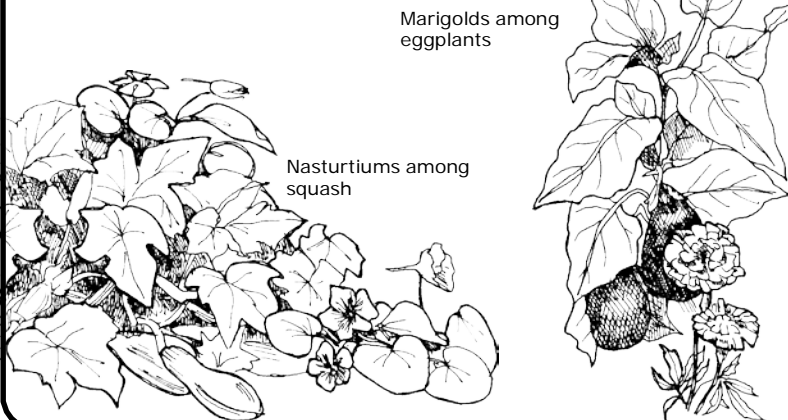
## HOW TO CONFUSE OR REPEL INSECT PESTS

Many insect pests attack only certain kinds of crops. They spread more quickly if a large area is planted with only the kind of crop they eat. If you interplant crops, it's not as easy for insect pests to spread and cause damage.



A large cabbage patch presents a big target for cabbage white butterflies flying by. Also, lots of cabbages in one spot make it easier for the cabbage white butterflies to move from one cabbage to the next. The same number of cabbages scattered among other crops over a larger area is a much less obvious target.

Many gardeners interplant with herbs and flowers that have strong scents, which may confuse or repel insect pests looking for crops to feed on. Here are some combinations that many gardeners use.





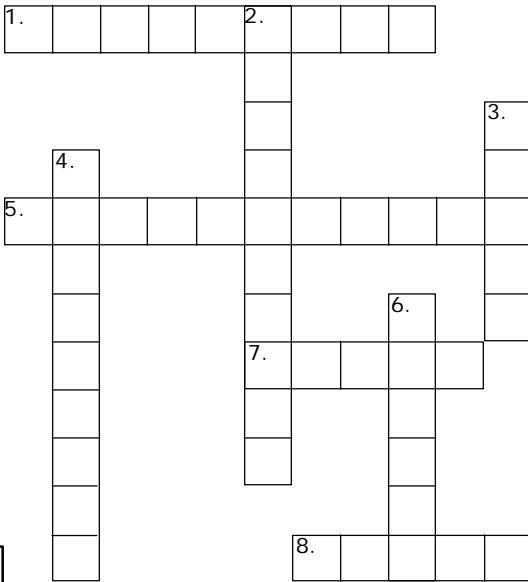
## CROSSWORD PUZZLE

### Across

- Flowers of dill and parsley attract these insects, which feed on insect pests.
- Try planting these among squash.
- Flowers in this family attract helpful insects.
- Plant these to confuse or repel insect pests and attract helpful insects.

### Down

- Do this instead of planting a large area with only one kind of plant.
- Try growing these plants among tomatoes.
- Try planting these among eggplants.
- Helpful insects often eat \_\_\_\_\_ from flowers.



## TRY THIS

### CHECK ON INTERPLANTING FOR INSECT CONTROL IN THE GARDEN

What you need

- \* Paper and pencil
- \* Magnifying lens, if available
- \* Insect field guide, if available

What to do

- Go to a garden to look for examples of interplanting for pest control. For example, try to find these flowers and herbs interplanted among crops: marigolds, zinnias, tansy, or other flowers in the Aster family; strong smelling herbs such as basil or dill; nasturtiums; and chives and garlic.
- Look for insects around the interplanted flowers or herbs. Spend at least 5 to 10 minutes observing insects that you find. Use a magnifying lens to observe them more closely. Do they have mouth parts for sucking or chewing? Are they feeding on the nectar and pollen of the interplanted flowers

- and herbs? Draw pictures of the insects.
- Try to identify the insects that you see. If possible, look them up in an insect field guide. Find out if they eat any insect pests.
- Share your observations with other youth and adults.



## SPOTLIGHT ON RESEARCH

How do you know what crops to combine when interplanting?

Researchers at Cornell University in Ithaca, New York, tested a method for selecting vegetables suitable for interplanting. They listed all the vegetables commonly grown in New York State, and then listed all the pests common to each vegetable. They reasoned that interplanting vegetables that have different insect pests would make it harder for insect pests to find their food. They also thought that plots planted with a variety of vegetables would attract a greater variety of beneficial insects.

They planted five different kinds of plots:

- Only squash;
- Plants with different ways of growing and different pests (beets, broccoli, sweet corn, squash);
- Plants with different ways of growing but with similar pests (sunflowers, cucumbers and squash);
- Plants with similar ways of growing but different pests (eggplant, snap beans, squash).
- Plants with similar ways of growing and similar pests (peppers, watermelon, squash, cucumbers).

The scientists sampled the insects by vacuuming each plot for one minute. They repeated this on five different days during the summer. Then they calculated the average number of beneficial and pest insects for each plot.

So far, their results show that interplanting of any vegetables increases the variety of beneficial insects. They will continue their research to test their hypothesis that combining crops having different pests and different growth habits will attract greater numbers and a greater variety of beneficial insects.

Source: Wright, M.G. and Hoffman, M.P. (2001) Selection of vegetables for intercropping as a pest management strategy. *Organic Agriculture at Cornell*. <<http://www.organic.cornell.edu/research/tsfsumms/organicpdfs/7intercrop.pdf>>



## RIDDLE

What is the difference between a fly and a lacewing?

A lacewing can fly but a fly can't lace wing.

Answer: