

# How does your garden grow

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Only 40 years ago farmers grew most of the nation's food supply without the use of pesticides. Now, with twelve times the pesticide use, crop loss has almost doubled.

How did farmers get along without pesticides? The techniques they used then can be adapted for use in the home garden now.

Farmers used to rotate their crops, never planting the same crop in the same place in the same year. For example, they would plant corn, then soybeans, then oats. This prevented the corn rootworm from becoming a pest. The soybeans harbor a bacteria that collect nitrogen from the air. When the soybeans are harvested, the nitrogen is released for the plants to use. Crop rotation makes sure one crop is never grown so often its pests become a problem.

Planting different crops together allowed predator insects a place to thrive. Interplanting certain flowers and herbs with the crop can confuse a pest by the scents produced, and reduce the number of pests present. Some flowers and herbs will actually drive insect pests away.

Studies have shown that plants grown with a large amount of nitrogen fertilizer a high carbohydrate content. Insect pests prefer these plants to those with a higher protein ratio. Using compost or manure instead of chemical fertilizers will provide your garden with a health-giving balance of nutrients.

A healthy plant is naturally able to resist insect and disease attack, just like healthy people. Poor nutrition and stress will lead to sick plants as well as sick people. Keeping the moisture content of your soil even by not flooding, maintaining a high humus content in your soil, and planting many different crops together will provide a healthy plant environment and attract insect predators. What if you follow these



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examples and still get aphids on your broccoli? Healthy plants can take more insect damage than you may think, and still produce well. Also, a few pests here and there is normal. Usually they will not get out of hand.

However, even if the number of aphids will not hurt your broccoli, most folks do not want to eat that broccoli. In this instance, there are products you can use that will kill the aphids without causing great environmental or health problems.

Pyrethrum spray is very fast-acting yet breaks down rapidly in sunlight. It is thus very useful just before harvesting your broccoli. Pyrethrum has an extremely low toxicity level for mammals, and is derived from chrysanthemum daisy flowers.

Rotenone is another commonly found insecticide that is relatively harmless and is derived from the roots of various trees. It does kill fish, though.

Ryania causes insects to lose their appetite. It is derived from a shrub, and presents no residue problem. It is available as a dust or spray.

Selective use of these poisons instead of a blanket spraying will help avoid killing the beneficial insects you want to attract. Proper gardening techniques like crop rotation will assure healthy plants. For more information on organic pest control, please send a self addressed stamped envelope to Marc Borgman, Community Garden Coordinator, 889 Camino del Sur, Isla Vista CA 93017.

## Titus will lead genealogists

Harry Titus has been elected as President of the Santa Barbara Genealogical Society for 1979. Amy Marsden will serve as Vice-President.

Meetings of the Society are open to the public on the first Saturday of each month from 10 a.m. to 3 p.m. at the Goleta Library.