

# COOPERATIVE EXTENSION

University of Arizona and U.S. Department of Agriculture cooperating.

the Cochise County Master Gardener

## NEWSLETTER

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Western Hackberry  
*Celtis reticulata*

### PLANT OF THE MONTH

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Staff Writer

The plant for June is *Celtis pallida* (Desert Hackberry or Granjeno) and *Celtis reticulata*.

The *C. pallida* grows along the highways of Cochise county. It grows as a large bush or small tree. Deciduous in the winter, its angular branches create an interesting effect.

As a wind break or a small garden tree, it is hard to find one more tenacious. It has a deep root system that not only helps it to be drought tolerant but also makes it difficult to blow over. Along with the deep root system there aren't any surface roots; therefore, it can be planted next to streets or sidewalks without fear of buckling.

The *C. reticulata* has the same wonderful deep root system as the *C. pallida* but it makes a much better shade tree. It grows to 30 feet high and wide, while the *C. pallida* grows only to 18 feet. Both tolerate hot dry summer winds that often take their toll on other trees at this time of year. They like the alkaline soil so common to this area. They do best when planted from one gallon size containers; their deep-rooting tendencies make larger containers not such a good idea.

If you need a good deciduous shade tree that won't need a lot of attention, try one of these Hackberrys.

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## THE BEST OF FRIENDS: A BRIEF GUIDE TO COMPANION PLANTING Part 1

Companion planting is based on centuries of creative experimentation and observation but in the uncontrolled world of the home garden. Some skeptics will argue that the basic wisdoms of companion planting are folktales not facts since they have yet to be tested in a controlled laboratory setting.

It is difficult to win an argument with such skeptics, but it is equally difficult to convince organic gardeners that the methods they have been using successfully for centuries don't work. Even if companion planting does not live up to its claims, all you've really done is rearrange your garden since many of the companion plants are useful in their own right.

Why not make up your own mind. Plant one group of vegetables using companion plants, and a similar group without using companion planting in a different part of your garden (at least twelve feet away from the first). Treat each garden identically throughout the growing season. Which garden produced the best vegetables? Which garden had the least number of pests?

Part 2 of this series will cover the use of repellent plants to control insect damage.

**BEANS** - Friends: potatoes, cucumbers, carrots, marigolds  
Foes: onions, garlic, leeks, shallots

**BEETS** - Friends: onions, cabbage, chard, broccoli, cauliflower  
Foes: field mustard

**CARROTS** - Friends: lettuce, chives, onions, peas, radishes, cabbage, leeks, worm wood, sage, rosemary  
Foes: dill

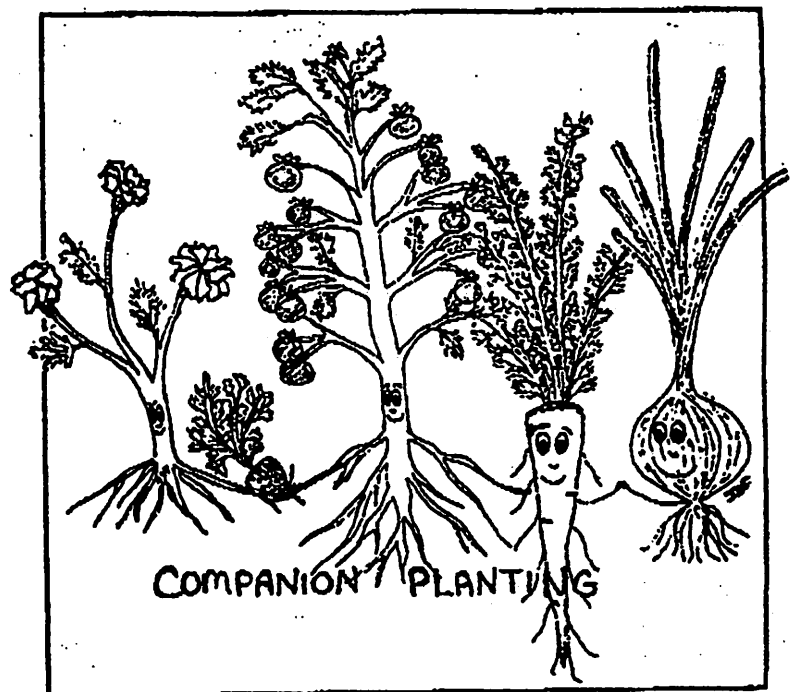
**CUCUMBERS** - Friends: cabbage, sunflowers, beans, radishes  
Foes: potatoes

**PEAS** - Friends: radishes, carrots, corn, cucumbers, beans  
Foes: garlic, onions leeks, shallots

**PEPPERS** - Friends: tomatoes, eggplant, onions, carrots, basil  
Foes: kohlrabi, fennel

**SAGE** - Friends: cabbage family, carrots, tomatoes  
Foes: cucumbers

**TOMATOES** - Friends: asparagus, parsley, cabbage, onions, mustard, carrots, basil, sage, rosemary  
Foes: potatoes, kohlrabi, fennel, walnuts



## JUNE REMINDERS

KEEP DEEP WATERING  
MULCH PLANT ROOTS  
FERTILIZE ROSES  
PLANT WARM-SEASON CROPS  
WATCH FOR NEW PESTS  
GIVE TOMATO PLANTS EXTRA TLC  
SHADE HEAT-SENSITIVE CROPS

A complete packet of "What to do" columns is available in the Sierra Vista Cooperative Extension Office. If you need to consult them.

## RECYCLING UPDATE

A City of Sierra Vista Recycling Directory is available from Sierra Vista Public Works at City Hall.

## CUTTINGS 'N' CLIPPINGS

\* Some of the "buzzwords" you might hear around a nursery these days:

**Hack-and-whack:** A landscaper who massacres a garden that was in good shape.

**Earthy crunchy:** A hippie or organic gardener.

**Nuking:** Spraying plants with pesticides.

**Trumps:** Rich people who want instant gardens without having to work on them.

**Involved:** A bug-ridden plant.

(NEWSWEEK: May 6, 1991)

\* There is one good thing coming out of California's continuing drought: better management of water resources and new water management technology. According to a recent issue of Turf

West, large scale use of reclaimed water may save California's billion dollar landscape industry and offer future homeowners an alternative to water cutbacks.

California water managers are seriously considering building or retrofitting existing water treatment facilities to process wastewater. Only a few of the existing water districts are currently equipped for wastewater purification so it will take time and money before California is ready to use reclaimed water on a large scale.

Unfortunately, new facilities are not all that's needed. To keep reclaimed water from contaminating drinking water, separate plumbing lines must be laid to carry the reclaimed water from the treatment centers into homes and landscapes. This makes using reclaimed water practical only in new construction or by trucking the water to storage areas. Nevertheless, reclaimed water is already being used successfully on several large golf courses and in the toilets of the University of California - Irvine athletic facilities.

Reclaimed water (often called greywater) is wastewater that has been purified to make it safe for irrigation but not for drinking or bathing. It is generally high in nutrients, from the organic matter in the wastewater, and also high in sodium and chlorine from the treatment process. It is safe for use in most landscapes, but is not used in vegetable gardens or orchards. Use of reclaimed water is usually governed by the State Department of Environmental Quality (DEQ) and the State Health Department. In Arizona, reclaimed water can be legally used only if it has been processed through a filtration system and tested by DEQ. What happens in California over the next few years will affect the future of greywater use in Arizona.

Water managers across the country, and especially in desert areas like Arizona, will be watching California's water managers closely.

## **THE BEST OF ENEMIES: A BRIEF GUIDE TO COMPANION PLANTING Part 2 - Repellant Plants**

One of the most accepted wisdoms of companion planting is the use of repellant plants to keep bothersome insects away from their favorite vegetable plants. Insects locate their favorite plants through smell and many repellant plants work by masking the scent of their neighbor plants. That is why strong-smelling plants such as basil, onions, garlic, and marigolds are good repellant plants. (It is a good practice to crush a few leaves or flowers on your repellant plants each morning to help release their scent.)

The following is a brief list of some excellent repellant plants as well as some cautions on their use.

**BASIL** - Repels flies, potato bugs, and mosquitoes, but should not be planted alongside rue.

**MARIGOLDS** - Repel Mexican bean beetles, aphids, cabbage moths, potato bugs, squash bugs, nematodes (if dug into soil), and maggots.

**CHIVES** - Repels aphids and Japanese beetles.

**BORAGE** - Repels tomato hornworms.

**NASTURTIUMS** - Repels aphids, potato bugs, squash bugs, striped pumpkin beetles, Mexican bean beetles, and whiteflies.

**TOMATOES** - Repels cabbage worms.

**CELERY** - Repels cabbage worms.

**ONIONS** - Repels carrot flies, but do not plant near beans or peas.

**LEEKS** - Repels carrot flies, but do not plant near peas or beans.

**WORMWOOD** - Repels carrot flies and most root maggots.

**CATNIP** - Repels flea beetles.

**RADISHES** - Repels cucumber beetles.

**GARLIC** - Repels Japanese beetles and aphids, but keep away from peas and beans.

**GREEN BEANS** - Repels Colorado potato beetles.

**ROSEMARY** - Repels bean beetles, cabbage moths, and carrot flies.

**SAGE** - Repels cabbage moths and carrot flies.

**THYME** - Repels cabbage moths.

### **DEMO PLANNED**

A Drip Irrigation Demonstration is planned for Saturday morning, June 22 in Palominas. After June 16, please call the Sierra Vista Cooperative Extension Office for information.

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Articles to be published in next month's newsletter must be received at the Sierra Vista office by June 21.

## ECOLOGICALLY-SANE PEST CONTROL (Part 5)

### E. Reduce pest populations with selected control measures.

1. Sometimes things simply get out of hand and you will need to take positive action to reduce problem insect numbers down to a more acceptable level. Here are a few mechanical control measures you can try before resorting to insecticide use.

#### a. Erect barriers to keep the pests away from your crop.

1) Cutworm collars - Use strips of stiff paper, cardboard or plastic approximately 3 inches wide and long enough to encircle the plant stem. Bury the collar into the ground 1 inch, leaving 2 inches above the surface.

2) Corrugated aluminum edging - A ring of this material works well in excluding snails and slugs, especially if you bend the top edge outward.

3) Diatomaceous Earth (DE) - This is the ground-up remains of ancient single celled creatures called Diatoms. The resulting powder has razor-sharp edges that slices into the body covering of any small creature that comes in contact with it. A wide ring of DE surrounding your plant will protect it from slugs, snails and most other crawling pests. Humans should avoid inhaling the dust as it will irritate the breathing passages and lungs. Eye protection is also recommended. Don't bother using the type of DE available at pool supply outlets, the sharp edges have been polished off, effectively rendering the powder useless for pest control purposes.

4) Sharp builder's sand - This material works in much the same way as DE (above) on slugs and snails but is not as effective on other (tougher-skinned) pests.

5) Tar paper disks - These are traditionally used to exclude root maggot flies. Slit the disk and fit tightly around the stem of the plant. The adult fly will not be able to get to the soil surface and lay her eggs.

#### b. Employ traps to capture the pests.

1) Band your trees - Place a 6 inch wide band of burlap or corrugated paper around the tree. Codling Moth and other larvae will run into it as they climb up the trunk and will spin their cocoons there. Unwrap the band periodically and destroy any pests you find. Replace with a fresh band.

2) Boards - Place lengths of boards, large flat stones, broken pottery, etc. on the ground in your garden. Many nocturnal pests hide in places such as this during the day. Check under the boards every day and dispose of any pests you may find. Other "hiding-place" traps include rolled up newspapers, old garden hose, carpet scraps and folded black plastic.

3) Lights - Use electric "Bug Lights" to zap pests or turn on the back porch light and stand by with a fly swatter. Many pests are attracted to the light, especially moths, beetles and true bugs. Be careful not to harm any Mantids or Lacewings that may be hunting in the same area.

4) Stale beer - A shallow saucer or wide jar lid of beer placed on the ground is a time-tested effective trap for slugs and snails. You can substitute 1 tsp yeast to 3 ounces water for the beer and still get good results. Check the trap every morning and remove the bodies.

5) Sticky bands - Same principle as the regular bands listed above (#1) but use stretchy material that fits tightly to the tree and cover the band with a sticky substance like Tanglefoot or petroleum jelly. The sticky goo will trap any creatures trying to climb up the tree trunk. This works especially well in preventing ants from carrying aphids up into the tree to feed. Change the banding frequently.

6) Sticky traps - These are various shapes (spheres, rectangles, triangles, etc.) of different colors that are covered with a sticky substance such as Tanglefoot. They serve two basic purposes. First, they provide an early warning system. When you observe a certain pest stuck in the goo, you are given notice that they have arrived and can take the appropriate action. Depending on your treatment plan this may mean starting a spray program or just monitoring the population levels. Secondly, the traps reduce the pest population all by themselves. Each insect caught is one that is not going to damage your crops or reproduce. If your pest population is low enough to start with, a few sticky traps may effectively keep it at a level not worth worrying about.

7) Pheromone traps - These work much the same way as regular sticky traps, but they add an extra "pull" in the way of an attractive odor. Some of the baits smell like fruit (usually rotting), others have a floral scent and quite a few use sex lures. Just identify your pest, bait and set the trap and check regularly. Again these can be used as early warning systems or just a population reduction device. Most of the traps use a sticky substance to capture the pest but a few may drown them or fry them with solar energy. Many commercial traps are available or you can make a simple one yourself. Common target pests include barnyard flies, Codling Moths and Japanese Beetles.

To be continued . . .

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