

Alliums in Your Garden

Garlic, Leek, Onion, Scallion & Shallot

November 2007

University of California Cooperative Extension
Stanislaus County

Alliums are a genus of plants that have provided flavorful seasoning in food for thousands of years. Onions and garlic were two of the most important crops consumed in ancient Egypt.

Edible Alliums

The following are the Latin names of edible alliums, and show how they are separated into different species:

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| <i>A. cepa</i> : onion |
| <i>A. ascalonicum</i> : shallot |
| <i>A. sativum</i> : garlic |
| <i>A. ampeloprasum</i> : leek, elephant garlic |

Inedible Alliums

You may wonder why the alliums in this guide are referred to as “edible alliums” as opposed to just “alliums.” The reason is there are many other plants in the allium genus not used to season food. Many of these alliums are bulbs with attractive flowers that can be colorful in a home landscape.

Chives are also alliums, and won’t be featured in this guide. Information on chives can be found in the UCCE Stanislaus County publication “Herbs in Your Garden.”

The following definitions are for the edible alliums used in this publication.

Onions

Onions can be white, red or

yellow and come in many sizes. Their flavors are categorized as sweet, mild or pungent.

Garlic

Garlic is composed of about 10 bulbs contained in a papery skin. It has a unique, pungent aroma that separates it from other alliums.

Scallions & Green Onions

Botanical references define scallions as any young crop of onion, shallot or leek. For most purposes, the terms scallion and green onion can be used interchangeably.

Shallots

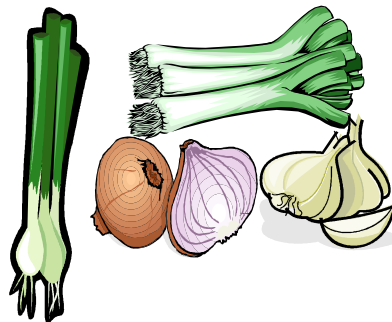
Shallots are composed of cloves encased in a papery skin. Shallots have a sweeter, milder flavor than onions and are usually coppery in color, although they can be gray or pink.

Leeks

Leeks have a mild, onion taste and are popular for use in soup. Surprisingly, elephant garlic is also a leek. It shares the same shape as ordinary garlic, but not its pungent taste. Elephant garlic has a softer flavor and its cloves can be roasted and spread like butter.

ALLIUM AVAILABILITY

Alliums are cool season vegetables that should be



planted in fall. Planting materials for these crops are available at local nurseries and some garden centers.

Seeds

Most of the edible alliums in this guide are available as seed. Seeds are the only form available for growing leeks.

Sets

Sets are small bulbs usually encased in a mesh bag. Red and white onions as well as garlic (as cloves) are available in this form. The varieties in the bags are generally unknown.

Elephant garlic and garlic are sold by the bulb. The bulbs are made up of anywhere from 5-15 cloves, each yielding a new plant.

6-pak and 4” containers

Onions, garlic and shallots are available in this form. Separate the tiny plants and plant them 5-6” apart in rows.

Bundles

Onions are available in bundles of 50-100 transplants



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in several popular varieties like Walla Walla, Stockton Red and Fresno White.

GROWING ALLIUMS

Alliums are shallow-rooted crops that grow well in almost any type of soil. However, dense clay soil or rocks can hinder growth and development.

If your garden has clay soil, adding copious amounts of compost can improve the garden bed, but it must be done each year before planting, as organic matter breaks down. Remove any rocks or clods from soil before planting.

Prepare most garden beds with 1 1/2" of compost mixed into the soil to create ideal conditions for alliums. A 4" raised bed contained with wood slats or bender-board will also work well. Gardeners with small spaces can grow alliums in pots.

When watering alliums, keep garden soil moist, but not soggy. Allow it to dry out somewhat between watering.

Alliums do not like competition, so remove any weeds growing in your garden bed. Weed carefully between the bulbs, as they are easily bruised.

Onions grown in compost enriched soil will not need additional fertilizer. If you wish

to fertilize, use a liquid kelp or balanced fertilizer 3 weeks after planting. Stop fertilizing 6-7 weeks before harvest.

Seeds

Growing alliums from seed takes patience and persistence. Germination can be patchy, the tiny plants may grow slowly, and competitive weeds can take over if not removed in a timely manner. Plant seeds in containers and transplant seedlings into your garden, or plant seeds directly into your garden bed.

Sow seeds 1/2" deep, 1/2" apart in rows 1 1/2 to 2 feet apart. Seeds are tiny, so if you can't space them apart, sprinkle them along the row and then thin later. Use thinned plants as scallions.

Onion Sets

Before planting, sort the bulbs into two piles: bulbs larger than a nickel and bulbs smaller than a nickel. The larger bulbs are best used as green onions. The small bulbs are varieties that will develop into large onions most successfully, although onions planted from sets have a tendency to "bolt" more than other planting forms, according to a publication on onions from the UC Davis Vegetable Research and Information Center.

Plant sets 1-2" apart for scallions, 1-2" deep in rows 1 1/2 feet apart. For traditional sized onions, space bulbs 5-6" apart in rows 1-2 feet apart. Plant the bulb so the tip shows above the surface of the soil.

Garlic Sets

Before planting, pull apart connected cloves. Then, plant with pointed end up 1" deep, 4-8" apart, in rows 1 1/2 feet apart.

Elephant Garlic

Separate the bulb into cloves, then plant with pointed end up, 1" deep, 8-12" apart in rows 1 1/2 feet apart.

Onion Bunches

Each fall, onions are sold in bunches of 50-100 young plantlets. Bury the plants 1 1/2" deep and place them 4" apart. Grow them in rows 1 1/2 to 2 feet apart.

BOLTING

Bolting is the term used when a flower forms on the stock of an allium. As bolting occurs, the plant shifts energy away from bulb formation. Cutting off the flowering stalk will not stop the process. When a plant starts bolting, it must be harvested immediately.

Bolting happens when the factors of temperature, variety plant size interact at just the right time. Lessen your losses



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by planting continuously from November to January.

GENERAL HARVESTING INSTRUCTIONS

All edible vegetables in the allium genus are easily bruised and should be treated with care. Never pull the top of a plant to remove it. Use a digging spade or shovel when harvesting.

Crops are ready for fresh use once pulled from the ground. To cure your crop, see instructions following each allium.

HARVESTING SCALLIONS

White onions can be harvested and used for scallions at any time.

HARVESTING ONIONS

Stop irrigating onions when about 10% of the tops (leaves) have fallen over. Nutrients from the stems will continue to move from the leaves to the bulbs until the leaves turn brown. Onions can be left in the ground and continuously harvested until all the tops are dry.

Prepare onions for storage by placing them on newspaper in a dry, protected area. To clean, brush off dirt and trim roots. Leave about 1" of the stem, unless you intend to braid the onions. Thick necked onions do not store well and should be used as soon as possible.

Store onions in a dark, indoor place with temperatures between 35-50 °F. As a rule, red and white onions do not store for long periods of time. Yellow onions can be stored for months because their skins are more resistant to diseases and insects.

HARVESTING GARLIC

When about 1/4 of the foliage in your garlic rows begin to turn brown, it's time for harvest. Dig up a few bulbs and peel off the wrapper. If cloves are separated, garlic is ready for harvest.

Unlike onions, garlic should not be left in the ground until ready for use. Dry bulbs in a well-ventilated place for about 3 weeks. Then, brush off dirt and trim roots. Store in mesh bags in a dry, airy place. Garlic can also be braided and hung in a cool, dry place.

HARVESTING LEEKS

Leeks are ready for harvest when the bulb is 1" in diameter. Use a spading fork to loosen the ground around the leeks, then gently pull them from the garden.

Leek leaves (known as "flags") do not turn brown like other alliums. Leek will last longer if left in the ground until ready for use. Once harvested, they can be stored in the refrigerator for several

weeks.

HARVESTING SHALLOTS

Shallots are ready for harvest when bulbs are about 1/4" in diameter. Like onions, shallots can be left in the ground until ready for use. Once the tops die back, mature bulbs should be harvested and stored in a dry place for 2 weeks.

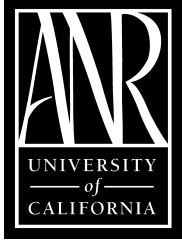
PROBLEMS & SYMPTOMS

Alliums are attacked by various problems in the garden. Symptoms of these problems usually provide clues to the cause.

Onion maggots

Onion maggots are a pest of most allium crops. Tunnels and cavities in the bulb and underground stem may signal an infestation of onion maggots. These symptoms are usually accompanied by the rotting of the allium bulb.

Adult onion maggots are small flies, and larvae are off-white. Unfortunately, once present there is no control for onion maggots. Infested crops must be destroyed. Do not compost. For future crops of alliums, protect with row covers immediately after planting.



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Onion thrips

Onion thrips are a pest of most alliums. If leaves turn silvery and have white streaks or blotches, the culprit is most likely onion thrips. Their appearance is common during dry, warm weather. Insecticidal soaps work well for eliminating this pest.

Fungi

Alliums can be attacked by different forms of fungi. The symptoms are pink, purple or white fuzz and the eventual rotting of the bulb. Remove infected crops and destroy: do not compost.

For future plantings, ensure soil does not stay overly moist, as these conditions help fungi thrive in the soil. Plant onions and garlic in a different place in your garden the following year.

Nematodes

Stem and bulb nematodes can be a problem in home vegetable gardens. Seedlings will have pale and thick deformed stocks. Older plants will appear stunted, and leaf tips will die and the plant bulb will be swollen at the base. All plants should be removed from this area. Onions, garlic, leek, chives, parsley and celery should not be grown in these areas in the future.

carry different varieties of seeds, sets and bunches. The Edible Allium guide on page five will list specific varieties available locally as well as additional information.

RECIPES

The following recipe lists the easiest way to roast garlic at home. The next page of this publication features recipes from www.about.com

Roasted Garlic*

Pre-heat oven to 400°F. Peel away some of the outer layers of the garlic, leaving the individual skins of the cloves intact. Using a knife, cut off 1/4 to 1/2" of the top of the cloves on the whole bulb, exposing the insides of the cloves. Place cloves inside a muffin tin and drizzle olive oil over the tops. Cover each garlic bulb with aluminum foil and bake for 30-35 minutes. The garlic will easily come out of each clove skin, and is wonderful spread on a piece of warm, fresh sourdough bread.

Just for fun

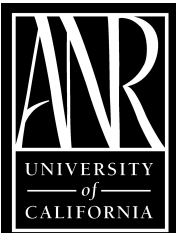
Check out this video by a garlic grower (and garlic lover) in Texas.

<http://www.youtube.com/watch?v=pdlhr8My9n4>

THE ALLIUM GUIDE

Nursery and garden centers

*Taken from http://www.elise.com/recipes/archives/001712roasted_garlic.php



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Cranberry Shallot Chutney

Ingredients

3 C fresh cranberries (12 oz.)
2 large tart apples, peeled, cored and chopped
1 1/4 brown sugar
1/3 C raspberry vinegar
1/2 C raisins
1/4 C finely chopped candied ginger
1/2 tsp salt
1/2 tsp curry powder
2 minced shallots
3/4 C chopped walnuts or pecans, toasted
Finely shredded zest of 1 orange

Instructions

Place all the ingredients except the nuts in a saucepan. Bring to a gentle boil and cook uncovered, stirring occasionally until thickened, about 20 minutes. Stir in the nuts and ladle into hot, sterilized jars, seal and refrigerate. Keeps for 6-8 weeks.

This chutney complements roast turkey, pork loin and duck. You can also add a spoonful to a slice of savory cheesecake.

Potato Leek Soup

Ingredients

3 leeks
4 potatoes, quartered
1/4 C butter
1/2 C milk
1/2 C light cream
1 qt water or chicken stock
1/4 tsp fresh chopped parsley
2 tsp chopped celery
2 tsp chopped shallots
1/8 tsp celery seed
1/2 tsp salt

Instructions

Peel and quarter the potatoes. Prepare the leeks by removing the green portions. Cut down the center lengthwise and wash thoroughly. Chop the white portions finely and sauté lightly with the chopped shallots in half the butter for 5-7 minutes. Add 1 quart of water or chicken stock, salt, celery, celery seed, parsley and potatoes. Simmer for 20-25 minutes. Remove potatoes and mash using a potato masher. Return potatoes to the cooking liquid. Stir in milk, cream and remaining butter.



Healthy Onion Rings

Ingredients

1 large onion
1 1/4 C Italian style bread crumbs
1/2 tsp fresh minced garlic
1 C low fat milk
1 C all purpose flour
3 large egg whites, slightly beaten

Instructions

Preheat oven to 400°F. Spray 2 large cookie sheets with nonstick spray. Cut onion into 1/2 inch slices. In a separate bowl, combine bread crumbs and garlic. Put milk, flour and egg

whites in three small, separate bowls. Dip each onion into milk, flour, egg white and bread crumbs (in that order). Place on prepared cookie sheets and bake for 20 minutes. Turn over and bake for 10 more minutes or until golden brown.

Makes 4 servings.

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Onion	Flavor	Comments
'Candy'	Sweet	Stores fairly well
'Early Yellow Globe'	Mildly Pungent	Stores very well
'Fresno White'	Moderately Pungent	Does not store well
'Spanish'	Sweet	Does not store well
'Southport Red Globe'	Moderately Pungent	Stores very well
'Stockton Red'	Moderately Pungent	Stores fairly well
'Walla Walla'	Sweet	Does not store well
Garlic		
Pink	varies	Packaging will not list variety
White	varies	Packaging will not list variety
Leek		
'American Flag'	Mild, onion-like flavor	Most common seed variety found locally
'Elephant'	Mild garlic-like flavor	Bulbs available
Shallot		
Copper	Mild, onion-like flavor	Packaging will not list variety

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Vegetable flavor information taken from:<http://www.burpee.com/category/vegetables.do>

Thanks

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