

Alliums and Legumes

Intro

Book learning AND experience

My garden: has sandy soil, cool microclimate. Adjust advice for your conditions!

Alliums are the ONION family

Onions

Leeks

Garlic

Shallots

Spring onions / scallions / green onions

Multiplier / potato onions

Walking / egyptian / topset / catawissa

BULB ONIONS

Storage onions

planted in spring and harvested in late summer

Onions are DAY LENGTH sensitive

We need "long day" onions here

Local seed catalogs don't bother stating - all are long day types

National catalogs (eg Stokes) or from southern US (eg Park) - make sure you get long day varieties

Varieties: Sturon (OP), Copra, Calibra (F1)

prefer light soils

pH 6-8, they like wood ash (extra potassium and calcium)

Seeds vs Seedlings vs Sets

Sets supposed to be "easy"

very limited varieties available

expensive

great for growing early spring onions

unreliable for growing bulb onions

many will not bulb at all

some will throw up a seed stalk before maturity

Seedlings are easy to transplant

limited varieties available at nurseries

Seeds have to be started early (Feb)

huge number of varieties available

slow growers

easy to transplant

cheap to grow lots and lots

seed is short-lived, only 2 years unless frozen

Overwintering sweet bulb onions

seed in summer

transplant in fall (seedlings may be available to plant in the spring)

harvest next summer

don't store very well

sweet, not pungent

varieties: Walla Walla

How to Grow

Onions have weak root systems

want light, rich soil with good moisture

Plenty of N and moisture for the leaf-growing phase - mulch

once bulbs start drying down, stop watering, pull back mulch

Can plant in groups of 4 or 5 seedlings in the same spot - onions will push apart as they grow

Keep weeded - onions don't compete well. Can mulch with boards or shingles

Harvest

- Wait for most of the leaves to fall over
- Don't knock the tops down, can affect storage time
- Pull on a dry day
- Cure in a dry, airy place. OK outside if it's not rainy. carport etc is safer
- Cure till the necks are shriveled and dry for best storage life
- Use damaged or thick/damp necks first
- Store ventilated (braided, mesh bags) in a cool *dry* place

Pests and Diseases

- Deer don't eat them enough to matter
- Slugs will eat the leaves - use your usual slug defenses
- Onion root maggots - rotate: wood ash didn't work for me: best is row covers

Garlic

- Hardneck - makes scapes, has bigger cloves
- Softneck - good for braiding, stores longer, can plant in spring
- elephant - mild flavour, actually a kind of leek

How to Grow

- Very well adapted to our climate
- get your "seed garlic" in fall from local growers (or buy @ nurseries)
- don't use supermarket garlic - treated to prevent sprouting, wrong climate/timing
- separate into cloves and plant the biggest - 4-6" deep, 6-8" apart
- small cloves - eat, or plant closely for "garlic greens" in spring
- Plant Oct-Nov
- grow on rainfall over winter
- feed with liquid N in Feb, Mar, Apr (fish fert, worm tea, compost tea, urine)
- hardnecks put up a "scape" (flower stalk) in early summer - remove and eat (pesto, etc)
- keep weeded / mulched: weeds can reduce yields by as much as 50%
- matures in dry summer weather Jun-Jul

Harvest

- Stop watering 2 wks before harvest (1 wk after scapes, for hardneck)
- Ready to harvest when: 6th leaf DOWN from top is starting to brown on 50% of the plants.
- Don't leave in the ground too long - head "shatters" and splits into cloves
- In light soil, can just pull them up
- In heavier soil, undercut & lift with a fork first
- Don't wash, clean or strip leaves or roots to start with
- lay or hang to cure for several weeks in well-ventilated shade
- If you're going to braid: do it after 1 wk of curing when leaves are not too brittle
- Curing is complete when necks are completely dry (roll between fingers to check)
- To store: cut off roots, strip dirty outer layer - but keep as many skin layers as possible. cut off tops 1/4" - 1/2" above the bulb.
- Save the biggest bulbs for next year's seed!

Pests & Diseases

- Rotate!
- Onion maggot in theory, but not in our garden
- deer?
- rust - white to yellow flecks on leaves, plant turns brown: worst in cool seasons with too much rain.

Leeks

Summer

- Fast growing, ready Aug-Sep

Not winter hardy
do you really want leeks in August?
Bolt if left too long in fall (flower stalk makes a hard core inside)

Winter

slower growing, ready Nov and onwards
Stand in the garden all winter, slowly growing
Deer may nibble outer leaves,, but you don't eat those anyway

How to Grow

Seed is short lived, 2 yrs unless frozen
Start with bulbing onions in Feb
Can start in groups like onions
transplant when size is between a pencil lead and a pencil
Plant deep, in holes or trenches, gradually fill with soil

Harvest

Loosen with a fork, then pull
Leave roots and tatty outer leaves in the compost bin
Watch for soil between the outer leaves at the top of the shank
Apparently it is possible to cut the leek just above the base, leaving roots in the soil, and they will regrow - I've never tried it.

Pests and Diseases

Onion maggots supposedly attack leeks but never have mine
Deer nibble them, but not badly

Other Onion Family

Potato or Multiplier Onion

No seeds - replant bulbs from pervious plants (like garlic)
Plant your first batch from the store in Spring, 8" apart: harvest in summer/fall the same year
Eat the larger ones if you want!
From then on, replant the larger bulbs around the same time as garlic
Keep the smaller bulbs to plant in spring, in case the larger ones are winter-killed
Harvest around the same time as garlic
Can grow one in a pot indoors over winter, for green onions

Egyptian / Topset / Walking / Tree / Catawissa Onion

Grows clusters of "bulbils" (small bulbs) on the top of the flower stem (no flowers)
Bends over to the ground, bulbils root - hence "walking" onion
It seems that Egyptian type has larger bulbils, 1/2 - 1", which are worth eating.
Catawissa type has much smaller bulbils, 1/4" or less.
Useful for early green onions; pull what you need from the growing clump and leave some to grow on
forms smallish strong-tasting bulbs later on

Shallots

These are a special type of multiplier onion
Seed-grown types are available as well as bulbs to plant
There's a lot of confusion over which are the "true" french shallot

Scallions / Green Onions / Spring Onions / Bunching Onions

These can be young onions from sets, young multipliers, young walking onions, or specific varieties from seed
I find seed grown types very slow, so I use sets and pull early, and walking onions.

Legumes

Nitrogen Fixation

Legumes develop special relationships with bacteria that live on their roots and "fix" nitrogen from the air, trading it to the plants in return for sugars.

If you are in a new garden, or a new location for legumes, they may benefit from adding "inoculant" which contains the right bacteria

Once you've been growing legumes for a while, the bacteria will be present in the soil anyway

Try digging up a plant (don't just pull it up) and looking at the roots for pinkish nodules where the bacteria do their work

Most of the fixed N is used by the plants for their own development, so they don't feed other plants near them unless you cut the tops down and let the roots & nodules rot into the soil - not what we want to do with food crops!

Legumes use the N especially do develop the seeds that we want for them - but at least you don't have to (and shouldn't) feed them extra N.

Peas

Shelling / English

Need to be shelled

Pod is not edible

Varieties: Green Arrow bush

Snow / sugar

Chinese stir-fry type

Pods are flat, edible

some types taste best before peas develop, others when peas are quite large inside the pod.

Varieties: Oregon Sugar Pod, Dwarf Grey Sugar, Oregon Giant bush

Snap

Pods are round, thick, edible

Peas inside are full size when ready

Best for weight of food produced per area

Varieties: Cascadia bush: Super Sugar Snap vine

Soup / drying

Not for eating fresh: pods are tough, peas not sweet

Intended for drying and using in soup etc

Can substitute for dried beans in recipes

Allow to mature all the way to completely dry

Dry down consistently in August for us: more reliable than dry beans

Varieties: Carlin and Swedish Red vines, Gold Harvest bush

How to Grow

Plant early: mid-March in the open, or earlier if you have a warm microclimate or under protection, or in a warm spring

Pre-sprout for a head start when it's too cold or too hot: soak overnight (<12 hours) and plant immediately, or allow to JUST sprout and then plant.

Peas can be transplanted, but it's a lot of work for not much gain. Direct seeding is way easier.

Many people plant a single row against a strip of netting: I think this is a waste of space. Skinny pea vines only make 2-6 pods each and they LIKE to be close together

Plant in a band: 4-6" wide, as long as you like, peas 1-2" apart all over. 2 bands fit in a 3' wide bed. Can plant a row of carrots down the middle and they will be straggly when uncovered, but quickly grow on to make a crop.

Cover with chicken wire to stop the birds pulling up the seedlings. Remove before the peas grow through too far (2" max).

Vines need support.

A frame trellis over the top - run string along the outside as the peas grow.

Along a fence: run strings to stop the vines flopping away

Even bush types need some support, esp if you have a windy garden.

Shorter A-frame

Pea sticks around the outside (after the seedlings come up)

Low fencing or expanding bamboo/willow trellis along each side.

SAVE SEEDS - cross-pollination is rare - let the best vines dry some pods for seed.

Succession plant every 3 weeks or so an extended harvest

Peas like it cool. Try a partial-shade location for summer peas (enation and powdery-mildew - resistant varieties)

Vine snap peas often keep on producing for months if they don't get powdery mildew: try resistant varieties, milk spray, baking soda spray.

Fall planting - snow peas are the best bet to get edibles before frost

Seed the 1st half of Aug: Sep is too late in my garden

Harvest

Snow peas - most varieties harvest when still flat, before peas swell: some varieties are best when the peas have partly developed. Taste test.

Snap peas: let them get fat but not overblown. Taste test!

Shelling peas: squeeze the pods gently to see if the peas have filled them properly. Pods can look big and fat when the peas inside are still tiny!

Don't drop snap peas from a height when picking - it bruises the pods.

Pests and Diseases

Weevils

little worms that eat the pea seeds.

Mostly a problem for me with dried peas, but I see some in green shelling peas too.

They overwinter in plant debris, so clean up your pea beds.

Rotate pea locations.

Spraying doesn't kill the larvae that do the damage as they are protected inside the pods.

Pick over dried peas or seeds being saved before storage to remove infested peas.

Powdery mildew

Happens at the end of the season, so may be best to just pull up the vines and compost

Snap peas may continue to crop: plant resistant varieties

Spray weekly, alternating these remedies to prevent build up of resistance:

10% milk solution

baking soda solution: 1 gallon water plus 1 Tbsp baking soda and 2.5

Tbsp of horticultural oil.(can use light veg oil: test a small area first!)

Garlic extract: two bulbs (not cloves!) of fresh garlic in a quart of water with a few drops of liquid soap. The liquid should be strained through

cheesecloth to remove solids and then refrigerated. That concentrate

should be diluted 1:10 with water before spraying.

Compost tea

Oil alone: vegetable seed oils such as canola oil can be used, at a rate of 2.5 to 3 Tablespoons per gallon of water, with the addition of a quarter-teaspoon of liquid soap to emulsify the oil.

Enation

Pea Enation Mosaic Virus

Spread by aphids in warmer weather

Plant only enation-resistant varieties after Apr 15

I've never seen it

Beans

Bean species

Common beans

Runner beans

Stage of Harvest

Green / french / snap / string

Shellies

Dry beans

Habits of Growth

Vine

Bush

How to Grow

These are warm weather crops - runner beans slightly more hardy

Plant early May, or earlier under cover

Bush beans are self-supporting

Vines need something to wind their way up: strings on a trellis, narrow poles in tepee, wire fence, etc. Runner beans can grow to 12 ft!

Runner beans may overwinter in a mild year if left in the ground

Harvest

Dry beans can have trouble drying down in fall if the rains start early.

Grow under cover that keeps the rain off, like tomatoes

pull the vines and hang or spread (do not pile) under cover to finish drying

Try dried peas instead!

Pests and Diseases

Deer LOVE beans and will eat them to stubs.

Other Legumes

Broad Beans

Broad beans can be planted in fall to overwinter, or in spring with the peas

Deer don't bother them in my garden

Overwintered beans ready earlier than spring sown

Chickpeas and Lentils

Grow very similarly

Plant early, with the peas

Smallish bushes

1-2 seeds per pod

Dry down in Jul/Aug: reduce watering

Both yield much less than soup peas on the same area

Black Eyed Peas

Black-eyed beans/peas, cowpeas, yard-long beans all same species but different types

Mostly a warm-climate plant

getting cool-climate variety to grow this year

Peanuts

Have some local seed to try this year.

Warm-climate plant, may like it better in the hoophouse

peanuts actually grow underground!