

Gardening 'Tips and Tricks'

by Ron Tanner

DIG it Kingman Community Gardens

Trick

How to stop Cutworms in your home garden

Trick

Materials Needed

1. *Plastic Cups*
2. *Earth Staples*
3. *Cutting knife*
4. *Sharp object such as awl or ice pick*
5. *Optional: Spaghetti tubing and Poly tubing*
6. *Scissors*
7. *Optional:*
Drip emitters and Connectors

Tips and Tricks

Controlling some other pests you might not see as pests or might not see at all

Tips and Tricks

Ants in the Garden

1. Frequently outbreaks of scales and aphids occur in the garden when ants tend them for honeydew, and protect them from their natural enemies.
2. Keep in mind that ants can also benefit the garden by feeding on fleas, termites, and other pests. They also aerate the soil and leave waste that improves soil quality.

If it becomes necessary to eliminate ants, eliminate the food source. Also Diatomaceous earth helps to repel ants.

Pill bugs, Sowbugs, or "Rolly Pollies" in the Garden

1. Rolly-pollies are a real menace to things that we eat which are soft bodied. Particularly bothered are things like strawberries. Even small new transplants.
 2. Rolly pollys are really crustaceans, not insects
 3. They can be good guys since they feed on decaying plant matter and convert it to something that can be recycled and benefit the plants.
- Use Traps to trap these pests and remove them by hand.
 - Traps can be something that lies on top of the soil like newspapers.
 - Use rotten fruit such as tomatoes to attract them. Remove the fruit and remove the pests
 - Diatomaceous Earth? Maybe

Snails and Slugs

Generally, we don't have much of a snail and slug problem because of lack of moisture and sparse plant growth

However,

When they appear, they feed on a variety of living plants and on decaying plant matter.

Snails and Slugs (continued)

1. Eliminate places where they can hide.
2. Locate vegetable gardens or susceptible plants as far away from snail and slug hiding places as possible.
3. Switching from sprinkler irrigation to drip irrigation will reduce humidity and moist surfaces
4. Handpicking
- Trick** 5. The old beer-baited traps buried at ground level to catch and drown slugs and snails that fall into them. **Trick**
6. Diatomaceous Earth

Grubs

Grubs in your garden can cause root damage to your garden plants.

In Arizona one of the most common grubs invaders is the June, or Scarab Beetle larvae.

The most effective treatment I have found is beneficial nematodes that are applied to damp soil. Be sure to follow package instructions.

The nematodes enter the grub, then eject their symbiotic bacteria inside the pest's body. The bacteria multiply and cause blood poisoning of the pest, leading to death within 24 to 48 hours.

One such product is Grub Away (no endorsement implied)

TIP Use caution when using liquid detergents to control insects **TIP**

1. Liquid Detergents such as Dr. Bronners peppermint soap (no endorsement implied) can be used to control Aphids, thrips, and whiteflies
2. However these soaps can cause damage to your plants (e.g. burnt leaves or worse)
3. As a general rule, use no more than 1 tsp per gallon of water. Use distilled water if possible.
4. Or a 2% solution – 2 oz to every 100 oz of water.
5. The detergent can also be mixed with neem oil as an insecticide
6. If you're not sure how much to use, then use commercially prepared insecticidal soap such as Safer (no endorsement implied).

TIP How to get Bermuda Grass out of your Garden **TIP**

1. Wash dirt off of Bermuda grass you are trying to kill.
2. Apply mixture of vinegar, table salt and spreader sticker or liquid detergent (1 gallon white 5% vinegar, 1 cup regular table salt, 1 tablespoon liquid detergent or spreader sticker), and a little nitrogen fertilizer. Mix and put in a sprayer.
3. Spray Bermuda grass that is vigorously growing,|not drought stressed.



Bermuda Grass (continued)

4. The Bermuda grass should have lots of leaf surface.
5. Best time to apply is during the late summer when the plant is storing food in the roots.
6. Wait Seven days to cultivate the Bermuda grass.
7. A second or third application may be required to completely kill well established strands.
8. Do not apply this solution to your garden soil as it may sterilize the soil.

TIP **How to grow sweet watermelons** **TIP**

Planting and Care

1. Plant seeds in the spring into warm, Rich, Well drained soil.
2. Some people pre fertilize soil with, for example 5-10-10 ,at the rate of 3 lbs per 100 square foot (I don't)
3. Some people plant in mounds – Flat rows work best for me
4. Some people use transplants – But if you do, make sure to use disease resistant transplants
5. If using transplants harden off, then water at planting time and not again until plant wilts in the afternoon
6. Watermelons require lots of water
7. Hot weather makes the taste sweeter
8. ***Important!!!***

At least two weeks before the plants ripen, Stop or Reduce watering and hope we have no heavy monsoon rains

Trick ***How to tell when Your Watermelons are ready for pickin'*** **Trick**

1. When the Tendril on the vine is Brown
2. When the underside of the melon is a nice yellow color
3. Thump test
4. The Old Smell Test

TIP **Success with Corn Growing in our part of Arizona** **TIP**

Planting

1. In our area the best time to plant corn is mid July. As the temperatures get cooler and the days shorter, there is a better chance of having corn ears with full rows of complete kernels

Corn (continued)

2. Plant in rows 20" apart and 4-6 inches between plants.
3. Small quantities can be planted in a circle producing 6-10 plants
4. Plant seeds about 1 inch deep

TIP Watering **TIP**

1. Corn is a heavy water user. The soil around the roots should not be allowed to dry. Corn needs at least 1 ½ inches of water per week. In our area, probably more when the weather is hot.
2. Watering is especially important before flowering.
3. One good way to water is with Drip Irrigation

TIP Fighting and Defeating Corn Pests **TIP**

Some Prominent Pests are:

1. Cutworms – control discussed earlier
2. Corn Borers:
Natural enemies, lady bugs, green lacewings, or use chemical control such as Dipel dust
3. Corn Earworms- can be controlled by:
Placing a clothes pin at the point where silk enters the ear helps keep worms out of ears
Applying Mineral Oil to the silk just inside the tip of each ear with an ear dropper

The case of the Cracking and Catfacing tomatoes

Types of Cracks in Tomatoes

1. Radial cracks spread outward from the stem scar.
2. Concentric cracking produces circular cracks around the stem end of the fruit.

Causes of Cracking

1. Cracking occurs as the tomato nears maturity usually at temperatures above 90° F (too much heat)
2. More susceptible varieties crack in the mature green stage and more tolerant varieties at later stages.
3. The earlier the cracking then the deeper and longer the crack becomes.
4. rapid growth stimulated by wet weather following a dry period or uneven irrigation

TIP Help in preventing Cracking **TIP**

1. Cracking may be reduced by growing tomatoes under light shade, probably no more than about 30 percent.

2. Water evenly – same amount and same time of day
3. Use a mulch on the soil's surface to help keep the soil more evenly moist.
4. Space tomato plants far enough apart (1-1/2 - 2 feet) to allow for plenty of sun and promote good air circulation

Catfacing

1. Catfacing is an abnormality that develops on the blossom end of susceptible tomato varieties.
2. It results from cool weather at blossom time and causes the fruit to pucker and have deep crevices.

TIP

Prune your Tomato Plants

TIP

To get bigger and sweeter tomatoes you should make it a habit of pruning your tomato plants. Besides better quality tomatoes, you will also have healthier plant that are more vigorous and free of disease.

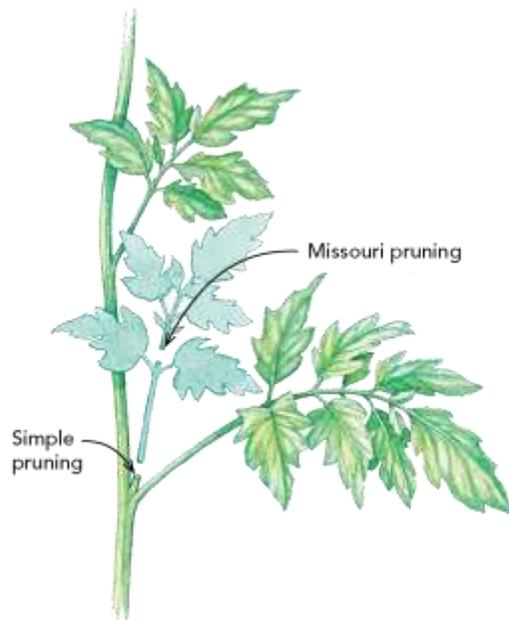
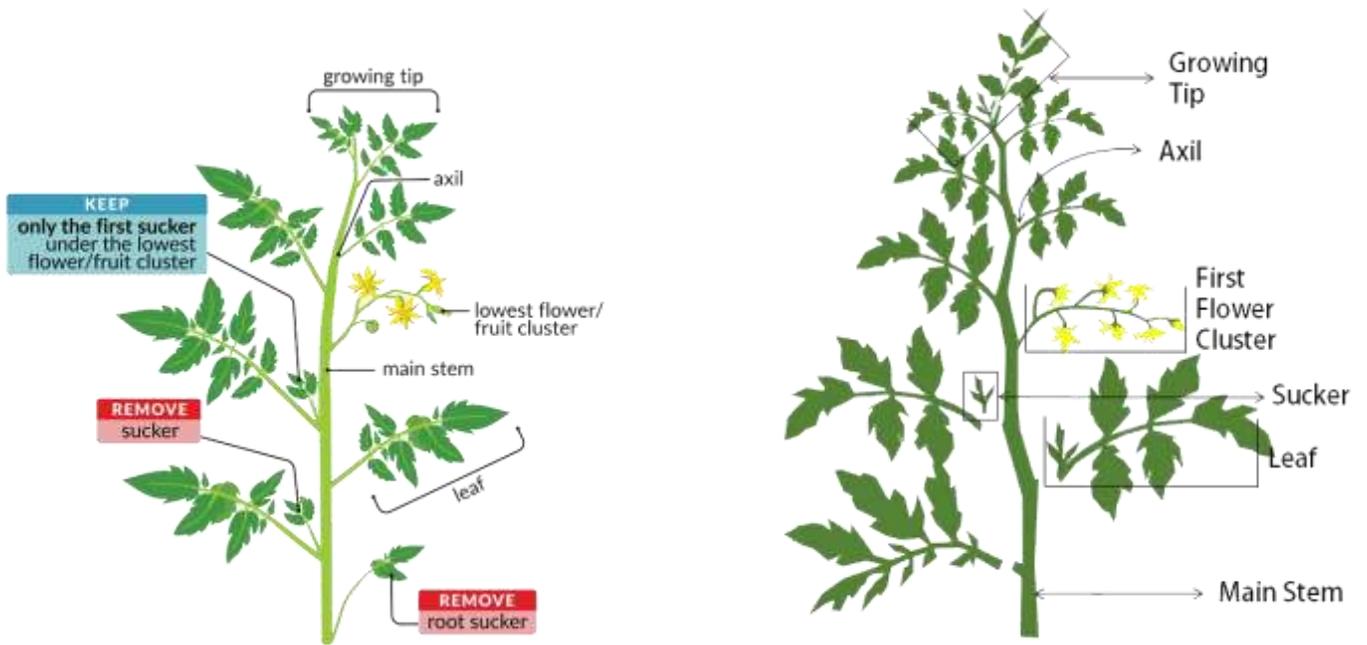
Here are some fundamental principles to keep in mind when pruning the tomato plant:

1. Start pruning your plants when they are young, right at transplanting time.
2. Do not prune in the heat of the day. Prune in the early evening or early morning when the sun is not as intense.
3. Remove the bottom 6 to 12 inches of the plant. That keeps the leaves off of the soil which makes them more susceptible to soil borne diseases.
4. Determinate tomatoes do not require much pruning. These plants are shorter and smaller and set fruit in a shorter period of time. Indeterminate tomatoes require more pruning.
5. Remove suckers from both varieties. A sucker is a stem that grows between main stem and a side stem. This allows better air flow which better prevents disease.
6. Don't take off too many leaves. This could prevent the leaves from shading the plant from harsh sunlight and cause sunscald on tomatoes or prevent photosynthesis, which is a process that makes the tomatoes sweet.
7. Prune to a one or two stem plant.
8. Remove dead or diseased leaves and branches.
9. You can cut off the tops of large indeterminate varieties to encourage thicker foliage in the lower portion of the plant. This will also make harvesting easier.
10. You can remove some of the tomatoes from the flower cluster to get bigger tomatoes.
11. When moving from one plant to another disinfect your scissors or pruners.
12. Tomatoes don't set fruit when the temperature raises about 85 to 90 degrees. This is a good time to prune (evening or early morning). When the weather gets cooler, you will have an entirely new set of fruit blossoms.

Trick TIP

TIP Trick

Tomato Plant Structure



TIP Attract Bees to your Garden **TIP**

1. Many garden Vegetables need good pollination.
2. Nature's number one pollinator is the bee.
3. To attract bees to your garden, plant fragrant flowers that are Pink, Yellow, Purple and Orange and other bright colors.
4. Bees cannot see red, so red flowers generally do not work as well
5. A wonderful bee attractant is Basil. It is also said to help to repel aphids, tomato hornworms, and whiteflies
6. Water also attracts bees

TIP Add Baking Soda to the base of your tomatoes for sweeter tomatoes **TIP**

1. Add some baking soda to the base of your tomato plants. That breaks down the acidity in the tomatoes, thus making them sweeter.

TIP How and When to Add Compost to your garden **TIP**

1. It does not matter the time of year in a warm climate.
2. When preparing a raw (never amended) desert soil for a garden it will take about three years of applying a heavy amount (about 50%) of compost to the soil each year.
3. Every time the soil is prepared for a new planting, organic matter or compost should be added.
4. It is best to add finished compost every time you plant.
5. If compost is added every time you plant, and you continuously garden for three years in your composted area, then the garden soil will be sustainable with small amounts of compost added each time you plant.

TIP Use Shutoff Valves on your Drip Irrigation lines **TIP**

1. By using shutoff valves on your drip lines (usually .700 poly tubing) you can
 - o regulate the flow of water to one row at a time
 - o Turn off water to one row of plants while leaving water on to the other plants



TIP Add Eggshells to your garden soil **TIP**

1. Spreading crushed eggshells around the bases of your plants will nourish your soil with calcium. Eggshells also repel certain insects. Slugs, cutworms and other insects do not like the crunch when they traverse over the crushed eggshells.

TIP The secret of Epsom Salts **TIP**

1. **Epsom Salt helps Seed germination.** Sulfur is easily lost during the germination process, so apply a drench of 1 tablespoon of Epsom salts for every gallon of water to the soil after seeding.
2. **Epsom Salt helps prevent root shock when transplanting.** Mix 1 tablespoon of Epsom salt for every one gallon of water and apply to the roots of newly re-potted plants until saturated. Or try adding 1 to 2 teaspoons of dry salts directly to the hole before transplanting a bush or flowers. After tamping down the soil, water thoroughly.
3. **Epsom Salt helps prevent yellowing of leaves on cucumbers.** View the video at <https://youtu.be/g8PbSxg6yVo>
4. **Epsom Salt helps repel pests.** For general pest control, mix one cup of Epsom salts with five gallons of water and use a hose-end sprayer to apply to foliage. For slug and snail control, sprinkle dry Epsom salts in the garden around the base of plants.

TIP Milk to prevent Powdery Mildew **TIP**

1. Mix a 40-60 percent solution of milk to water. Put in a spray bottle. You can also use it in a tank sprayer. Spray the top and undersides of your plants. It's best to use this solution in bright sunlight. No one is exactly how this works, but for some reason it keeps the powdery mildew at bay.

TIP Hydrogen Peroxide **TIP**

1. To give your plant roots a good head start use the 3% solution. Add 1 teaspoon (5 ml.) per cup (240 ml.) of water in a spray bottle and mist the plant. This amount is also suitable for pre-treating seeds to control fungal infections. For plants with root rot or fungal infections, use 1 tablespoon (15 ml.) per cup of water. The solution can be made up and stored for future use. Store it in a cool, dark place as exposure to light diminishes the potency

Trick **TIP** Tomato Hornworms-How to Prevent **Trick** **TIP**

1. Spray your tomato plants with a mixture of dish soap and water. Spray the plants thoroughly, then when the plants are still wet, sprinkle some cayenne pepper on the leaves and tomatoes to keep the pesky tomato hornworm at bay. Check out the video at this link. <https://youtu.be/891ZHhdF148>
2. **Bacillus thuringiensis bt.** - Is all natural. Follow the instructions and spray your plants.

TIP Beneficial Nematodes **TIP**

1. **Beneficial Nematodes**-Are an excellent environmentally friendly means to get rid of harmful soil dwelling pests that can destroy your young plants root systems. They act in a parasitic manner and can rid your soil of grubs and Japanese beetle larvae in 24 to 48 hours. They do not harm earthworms, bees, or other pollinators.



TIP Earthworms **TIP**

Earthworms aid in the degradation of organic residues in the soil with the release of elements such as carbon, nitrogen, sulfur, and other nutrients. The action of their digestive fluids and increased microbial activity in the casts (droppings) tends to solubilize inorganic plant nutrient elements present in inorganic soil minerals. The structural stability of ingested soil is improved through increased microbial activity while the soil is within the worm and after it has been deposited as casts. The extensive burrowing of the earthworm improves soil aeration and may increase water penetration into soils. Under natural conditions the earthworm will feed on surface organic litter and deposit its casts in the plant root zone. After further microbial decomposition of the partially digested residues, plant nutrient elements are released

Trick If you purchase earthworms, here is how to put them in your garden: **Trick**

1. Keep the earthworms cool until you are ready to put them out.
2. Moisten your soil and loosen it gently.
3. Put the earthworms in equal piles in the quadrants of your garden beds
4. Put wet newspaper over the piles of earthworms. That will make them burrow into the soil and prevent predators from eating them before the go underground.



The Pesky Ground squirrel



The Ground Squirrel is one of the most problematic pests in your garden and yard. They eat plants in the seedling stage, can gnaw at the roots of your plants, can nibble on your plastic sprinkler heads and burrow in your lawn or garden. They also attack fruit trees. They are not the same as the chipmunk, although at a glance they look quite similar. The biggest difference is that chipmunks have noticeable stripes on their heads.

Ground squirrel control:

- Trick** 1. **Castor Oil**- ¼ cup castor oil and two tablespoons of liquid detergent. Use two tablespoons of this mixture to one gallon of water. Spray wherever you have seen the culprits. The castor oil mixture on plants will give the squirrels, which will weaken them and make them easier to trap. It will also somehow repel them. Also, you can install a castor oil plant around the area. This will also help to repel them **Trick**
- Trick** 2. **Rat traps**-The trick is to use enough rat traps. Use peanut butter, or apples coated in peanut butter. Do not activate the trap yet. Let the pest get used to eating the bait off the trap without any consequence. When they learn to have no fear or suspicion of the trap, then bait the traps and set them. Voila! You've got them. If no luck in two to three days, you may need to freshen your bait. **Trick**
- Trick** 3. **Fumigation**-Enough said. Gas cartridges can be purchased locally or on line. Use 1 or 2 cartridges per burrow. Fumigation is most effective in the spring when the soil moisture is high. Do not fumigate in the heat of summer or when the soil is dry. **Trick**
- Trick** 4. **Pepper spray**-Make your own mixture by adding a cup of red pepper flakes to a cup of hot water. Let this soak overnight. When ready to spray, add a little dishwashing detergent, or spreader sticker, shake it up, then add a pint of water. Spray plants where you see the squirrels have been **Trick**

nibbling. Also spray this to the entries to their burrows. This concoction will probably make them leave the area for more tasty grounds.

Trick 5. The Old **bubble gum** trick-Not proven, but possibly works. Ground squirrels like sweets. So put some bazooca bubble gum at the entrance of their burrows. The young ground squirrels, especially, eat the bubble gum and it expands in their intestines, thus destroying them. *Trick*

Trick 6. **Coffee Grounds**-Not proven, but possibly works. Spread used coffee grounds around the base of plants where the squirrels have been eating, and around the entryways. Someone the coffee ground smell is unpleasant to the rodent. *Trick*



Keep Ladybugs from flying away



Ladybugs are a tremendously beneficial insect for your home garden. They can eat between 25 and 50 aphids per day. The whole trick is get them to stick around. They have a tendency to want to fly away, so we have to figure out ways to keep them in the garden. Here's some things you can try.

1. When you first get the ladybugs, mist them with a spray bottle because they will most likely be dehydrated. Put them in the refrigerator until you are ready to release them.
2. Spray your plants first before releasing the ladybugs
3. Always release ladybugs late evening or night because ladybugs do not fly at night. They will fly away faster in the heat of the day
4. Release them on the plants that have a food supply-namely aphids
5. Give them something else to eat when the aphids run low. Put out raisins, or grapes, or other fruits that are non acidic for them to munch on.

Trick 6. Give them an alternate source of food and a homemade food habitat. You can use toilet tissue rolls hung from strings on your plants. Put honey inside the toilet tissue roll and the ladybugs will gravitate toward the honey, plus the roll will provide shelter. They will feel at home and lay eggs. *Trick*

Trick 7. Put some plants in your garden that will attract ladybugs such as dill, cilantro, and chives. *Trick*

Trick 8. Non scientific but spray the ladybugs with a sugar water mix. That will make it more difficult for them to fly away. *Trick*

Bonus!

Indoor Seed Starting for the Outdoor Vegetable Garden

Ron Tanner-DIG it Kingman Community Gardens

Bonus!

It is not too early to start making plans for our spring/summer vegetable gardens. An important thing to do within the next few weeks is to start seeds indoors so that you will have healthy seedlings to put out into your garden when the weather grows warmer and the soil heats up. The materials needed are:

- Fresh good quality seeds, either store bought or seeds harvested from last year's crops
- Seed starting potting mix, vermiculite, Perlite, Sphagnum peat, small amount of fertilizer
- Materials to start your seeds in. You can use several items found around the home: left over egg cartons, empty toilet tissue rolls, baked chicken or salad container, used cake lid. You can also purchase readymade seed starting kits from your local garden center

Follow these steps to ensure the growth of healthy seedlings that you will be proud to put into your garden after the last frost date:

- Fill the containers you've made or bought from below with the soil-less mixture and moisten with water. Tamp slightly but don't overly compact the soil media
- Sow three seeds per container or cell (if using a store bought kit) by poking a hole and covering with the soil mix
- Label the container with the type of seed planted (very Important because most young plants look alike)
- A good rule of thumb is to sow seeds twice as deep as the seed size diameter
- Gently water the containers without disturbing the seeds. This can be done by misting or allowing the water to soak in from below if the container type allows
- You won't need light at this stage, but you will need gentle warmth (not harsh heat). Provide it by setting the containers on top of a refrigerator or dryer; or by using special heating mats sold for this purpose
- Cover the soil surface with saran or a clear container lid. You may punch small holes in the lid to let a little air in
- When the seedlings germinate remove the clear container lid so they can have air
- Place the germinated seedlings in a bright window or artificial light to prevent soft, leggy growth. If the seedlings are in a window, rotate the container periodically so that all seedlings will get adequate light
- Simple artificial lights can be made by using a two tube fluorescent fixture that has one 40-watt cool white and one 40-watt warm white tube. Special grow light fixtures are also available
- Plants should be kept six inches from the lights and lights kept on 16 hours per day. Raise the lights as plants grow. Temperatures of 55-60 degrees F at night and 65 to 70 degrees F in the day to prevent soft leggy growth
- As the seedlings develop (usually their second set of true leaves), select the best seedling and thin them to one plant per cell/pot. Handle seedlings by their leaves to avoid damaging the tender stems, or, snip off the weaker seedlings at the soil level to leave the stronger one remaining in the pot
- Add water to soil mixture only when moisture can no longer be squeezed out by pinching the medium between the thumb and forefinger. Water soil only when it no longer feels moist when rubbed between the fingers
- Fertilizer should also be applied periodically. Liquid fertilizers are convenient for this purpose. Prepare the solution exactly as prescribed on the label

•What Information is contained on a seed packet

CAULIFLOWER, Early Snowball -- *Brassica oleracea* (Botrytis)
 When planted in early spring or late summer so that it can mature in cool weather, this popular cauliflower variety rewards you with large heads of snowy white curds. Enjoy this mild-flavored vegetable raw, steamed or pickled.

Planting Depth	Seed Spacing	Days to Sprout	Spacing After Transplanting	Spacing Between Rows	Days until Harvest
1/2"	2 seeds per pot or cell	5-10	18"	24-36"	60*

*From setting out transplants.

PLANTING: For a spring crop, start seeds indoors 4 to 6 weeks before planting outdoors. Harden off seedlings by putting them outside during the day for 1 week before transplanting. Plant after danger of a hard spring frost is past. For a fall crop, transplant seedlings into the garden in mid to late summer. Before transplanting, enrich the soil with compost.

GROWING: To avoid disease problems, don't plant where cauliflower or related plants grew within the last 2 years. Water regularly and fertilize monthly. When the head begins to form, tie the outer leaves up over the top of the head to "blanch" it (make the curds white).

HARVESTING: Cut the stem just below the central head while the flower buds are small and tight.

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Labels with arrows:
 - **Planting Depth** points to 1/2"
 - **Seed Spacing** points to 2 seeds per pot or cell
 - **Days to Sprout** points to 5-10
 - **Spacing after transplant** points to 18"
 - **Spacing Between Rows** points to 24-36"
 - **Days to Harvest** points to 60*
 - **Planting, Growing Harvesting** points to the PLANTING, GROWING, and HARVESTING sections.



Starting Seeds Indoors

Things you'll need



Seed Starting potting mix



Perlite Vermiculite



Sphagnum peat



Seed Starting fertilizer
(no endorsement implied)