

# **RONNIGER**

## **Potato Farm LLC**



### **2010 Catalog & Growers Guide**

Offering the largest selection of certified disease free seed potatoes to home gardeners, small farmers, enthusiasts, and hobbyists.

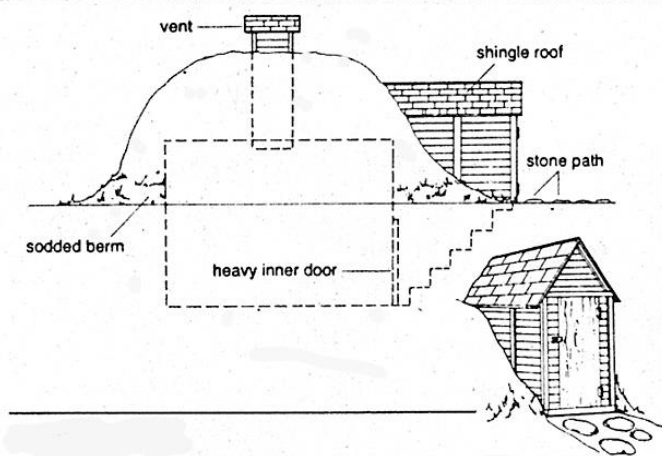




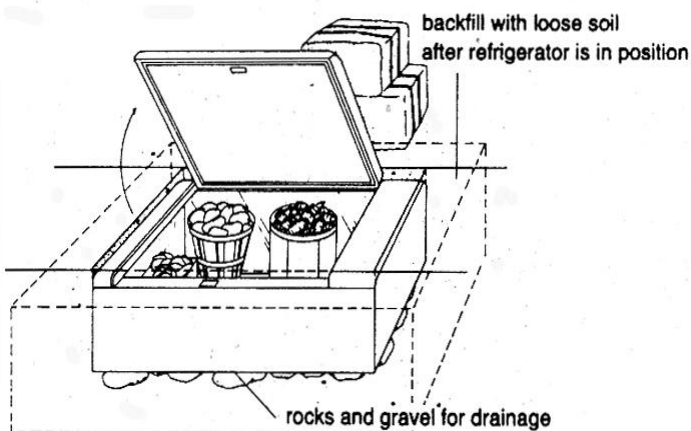
# Potato Garden



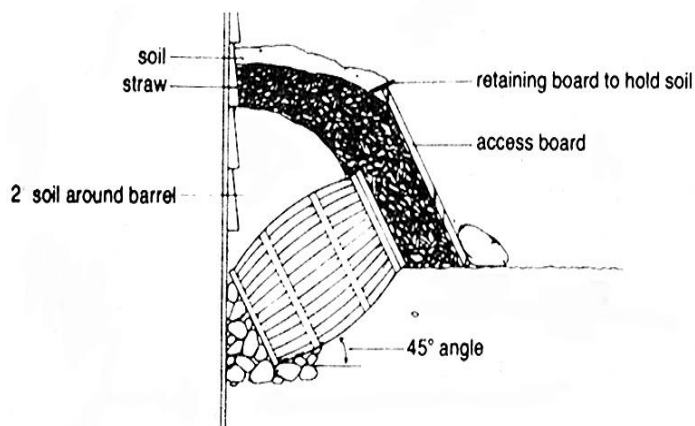
## Heides' Root Cellar

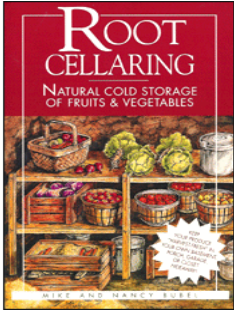


## Buried Refrigerator



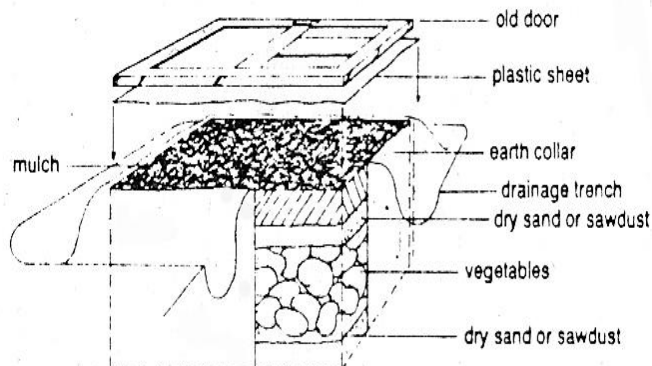
## Storage Barrel



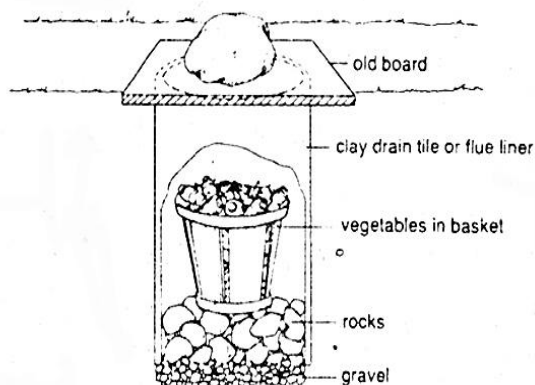


**ROOT CELLARING**  
By Mike and Nancy Bubel  
**\$17.95**

## Earth Pit



## Drain Tile Storage





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## EXPLANATION OF SYMBOLS:

**CS** = Certified Seed Potatoes. Mainly Colorado Certified Seed Potatoes and some from other states such as Idaho.

**NC** = Non-Certified Seed Potatoes. These were grown from Certified Seed Potatoes but not entered for certification this year. They are produced mainly for garden seed.

**O** = Certified Organic

**N** = Naturally Grown. These are grown the same way as our certified organic potatoes, however, to save on time and costs, they were not entered for organic certification.

**C** = Conventional. Pesticides may have been used on these during the growing season. These are purchased from other farms for resale.

**LM** = Limited, less than 800 lbs available for sale. These have a higher limited price.

**CO-PVP** = Plant Variety Protected— These are varieties that are protected under the Federal Plant Variety Protection Act and are owned and controlled by the Colorado Certified Potato Growers Association (CCPGA). At this time CCPGA allows you to buy small quantities of PVP seed from us for your own garden use and also allows you to sell as food through CSA's, at farmers markets, to restaurants, etc. Larger commercial ventures will need to pay a royalty. You are not allowed to grow these PVP varieties for seed stock unless you first get full written consent from CCPGA. Give us a call if you need to grow seed stock and we can help you set it up.



## OUR GUARANTEE

We will be responsible for your seed potatoes arriving safely and in good condition, and our seed potatoes will be 100% satisfactory. If anything purchased from us proves otherwise for any reason, we will either replace it, or refund the purchase price, whichever you wish. We cannot, however, be responsible for the resulting crop.

## WE WANT TO HEAR FROM YOU

Please include a note with your order . . . we like comments, constructive criticism and especially down-home humor! We can better serve you and improve our catalog selections with your comments and suggestions.



# Potato Growers Guide



## Handling Your Seed Potatoes

Open all boxes upon arrival and leave open for air circulation. You may plant them right away or leave them at room temperature for a month or two. Find a cool place if longer and avoid drying conditions.

Here in a 40 degree cellar, your potatoes have been peacefully hibernating. Once taken out and shipped, they will warm up, break out of dormancy, and start growing. If your potatoes arrive with sprouts, handle them carefully when cutting and planting, leaving the sprouts on. But don't worry if they break off because they will grow back. They just emerge faster when planted with sprouts in tact. If your potatoes arrive without sprouts, you can either pre-sprout them or plant right away in warm soil, 50 degrees or more.



## Pre-sprouting Seed Potatoes

The practice of greening and pre-sprouting seed potatoes before planting, encourages early growth and hastens the development of marketable tubers. It is a method commonly used by growers of early potatoes in European countries but little used by American growers.

The method is simple: Spread the tubers in open-top crates, boxes or flats. The tubers are placed in the flats with the seed end uppermost, with usually only one layer to a flat. Bring the flats into a warm living space (70 degrees Fahrenheit) and to a location where the light levels are medium in intensity. The warmth tends to stimulate the development of strong sprouts from the bud eye clusters, which, in the presence of light, remain short and stubby and are not easily broken off.

Usually seed potatoes are exposed to light and warmth a week or two before planting. The benefits derived from greening and germinating the seed before planting are not limited to merely gaining a better stand and quicker maturity of the tubers, but it is claimed that a heavier yield is also likely.

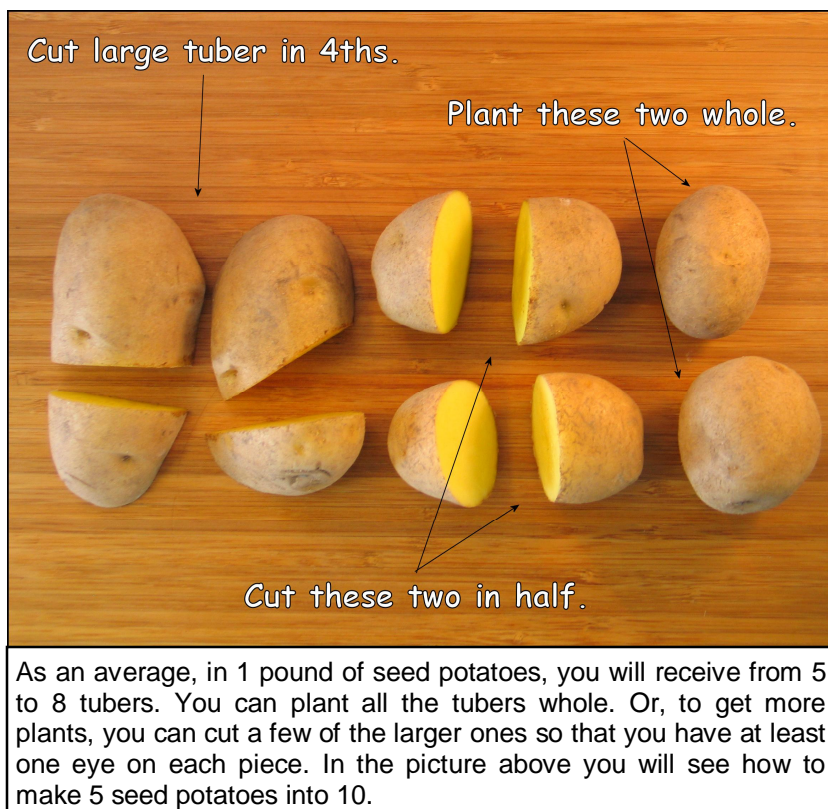
## Soil Preparation

Good potato soil will be well drained and, at the same time, able to retain moisture. Sandy loam is ideal. Other soils can be improved by incorporating organic matter which tends to lighten heavy soil and enrich sandy soil. Potatoes grow best in a soil pH of 5.0 - 7.5. Optimum soil temperature for beginning growth ranges from 50 degrees to 70 degrees Fahrenheit.

If your soil is compacted, you'll want to loosen it up with a shovel, fork, or rototiller. With a shovel, don't completely turn the soil over, simply dig a spot, with the shovel buried 8 to 12 inches and toss it back in. If you are incorporating compost, you can turn the soil a little more so that the compost is mixed in 6 to 8 inches. The idea is not to destroy too many of the beneficial soil microbes. However, for soils that are highly compacted, it is better to get the soil loosened up to a depth of 8 to 12 inches incorporating compost. The compost will be the start of another batch of beneficial microbes. If using a rototiller, you'll want to work it in as deep as it goes. The long term goal for potato soil is to have a loose living soil full of beneficial microbes.



# Potato Growers Guide



## Cutting Seed Potatoes

All tubers the size of a hen's egg (1-3 oz.) may be planted whole. For larger tubers, cut the potato using a clean, sharp knife so that each piece will contain 1 or more eyes. Pieces should be cut with plenty of flesh around the eyes, since the plant will utilize this stored food during the first 2 or 3 weeks of growth. If the variety has many eyes, try for two or more eyes on each piece. This provides opportunity for more vines to grow and thus yield more potatoes.

Seeds may be planted immediately after cutting if you have good control of soil moisture. If there's a chance the soil may be too wet for a long period of time, you'll want to allow the cut pieces to dry out prior to planting. Spread them out on a table in the shade or one layer deep in shallow boxes for drying. Avoid shriveling which may weaken the seed piece. Also recommended for wet soil conditions is the application of sulfur or Fir bark dust to the freshly cut pieces. Place 1 or more tablespoons in a large paper bag, and toss the pieces around to cover them with dust. This may guard against threat of infection by bacteria and fungus in wetter soil. If you are able to plant cut seed successfully, then there's no reason to go through the extra steps of drying and dusting.

**Everything that slows us down and forces patience, everything that sets us back into the slow cycle of nature, is a help. Gardening is an instrument of grace.**  
-May Sarton

## Planting

The rule of thumb to follow, for the earliest planting time, is to plant 2 weeks before your last spring frost. Then of course, you can plant anytime after that, giving yourself at least 3 months growing season before a major fall frost. Some growers plant later than this for better growing temperatures. Check with the locals. A good beginning soil temperature to plant in is 50 degrees Fahrenheit.

The width between rows is determined by the size of your garden and method of cultivation. Farmers need 30" -36" between rows, while gardeners can get by with 20" -26". You might adjust your spacing to suit adverse conditions. Wider spacing can help alleviate stress due to drought or poor soil. Tighter spacing may give you a uniform canopy of foliage to cool the soil in summer.

Dig a shallow trench about 6" - 8" deep. Plant your seed potatoes about 12" apart. Using a rake, cover the seed pieces immediately after planting. Do not cover too deep, 4" maximum, and leave the remaining soil for later.

## Hilling

In approximately two weeks, depending on soil temperature, green leaves will emerge. When the plants have grown to about 8" high, gently hill with soil brought up from both sides of the plant using a dull hoe. Bring the soil up about 3" inches leaving 4" - 6" of the plant exposed. Hilling cools the soil and creates space for tuber development. All tubers will form at the same depth of the seed piece and higher. Another hilling of 1 to 2" is beneficial 2 - 3 weeks later. Keep the blade of your hoe well away from the plants so you do not damage the roots. If you see potatoes poking out of the hills, add more soil to cover them.





# Potato Growers Guide



Hilling is crucial to establishing your crop. By gradually building an ever-larger hill of soil around the plant, you are building the site for your potatoes to develop. Give them plenty of room between rows and build your hills wide and ample to produce your bumper crop.

## **Raised Bed Method**

Make your raised bed at least 12" deep and fill with soil. Plant seed potatoes 6" deep and cover to the top. If you are crowded, space them 8" - 10" apart in rows 20" apart. If you have room, plant 12" apart in rows 24" - 30" apart. Cover to the top. If you live in a wet climate, only cover to 4" deep so that the potatoes can get a quicker start. Then cover to the top later when the plants are tall enough.

## **Mulch Alternative Method**

The Mulch Method is a good alternative if your soil is shallow, rocky or compact; if you're planting in the heat of summer, or have problems with scab in your soil. The best mulch to use is loose, seed-free hay or straw. Leaves and dried grass clippings can be used. It is important to have plenty on hand.

Prepare your seed bed. Plant the seed pieces. They can be placed on the surface or lightly trenched, spaced as usual. Loosely shake mulch over the bed, 6" - 10" deep. As the plants grow, continue to add more loose straw, as if hilling. Be sure you keep the tubers well covered so that sunlight doesn't get to them and turn them green. The mulching method provides excellent weed and moisture control and reduces stress due to heat. At harvest, pull back mulch. Your nest of potatoes will be clean, uniform and easy to harvest.

## **Cage Method Alternative**

Grow potatoes in vertical boxes, cribs, barrels or wire cages. Set your cage on prepared soil. Plant strong seed pieces 6" - 8" apart and cover lightly with 4" of soil. When the plant emerges and grows, begin adding mellow compost, mulch or soil always leaving at least 6 inches of plant exposed. Continue this process until the plants stop their upward progress and/or blossom. Then let them finish out their growing season providing them with plenty of water. As the plant stems lengthen, so do the length and number of underground stolons, which are what produce the potato tubers. More potatoes form in less space and the yield is increased 2 or 3 times. This is a great way to grow a lot of potatoes with limited garden space.

## **Weeding and Cultivating**

Weeding is essential during this early part of the season. Using a hoe in a cultivating manner is a good way to check weeds when they are seedlings. Later, potato plants can canopy the soil and weed problems are slight. Pull out the ones that pop out. After hills are formed, mulch may be applied to retain moisture and suppress further weed growth.

## **Watering**

Potatoes can be dry-land farmed where moisture retention and natural rainfall are adequate. However, if your summer is long and dry, your soil is sandy, or you would like to increase yields, you'll want to water.

Potatoes need about 1" - 2" of water per week. Keep the soil evenly moist, but not too wet, from the time of emergence until then end of the season. Try not to let the soil completely dry out as this will cause sudden re-growth when watered, giving your tubers ears and noses, splits, or hollow heart. Each time you water, let it soak down 8" to 12". A few thorough waterings, along with your efforts at hilling or mulching will be an adequate program to conserve soil moisture. Come up with a schedule, every three days or so, to check the soil moisture down at the roots.

Stop or slow down watering at the end of the growing season when plants turn yellow and begin dying. But make sure the soil does not completely dry out. You want some soil moisture but not as much as you had while the vines were drinking it up. Harvesting in drier soil is easier and potatoes are better cured and ready for storage.

## **Fertilizing**

Other than green manures, the best organic fertilizer for potatoes is good compost mixed into the soil the fall before planting. You may also mix in some compost before planting, however make sure it is done composting. Fresh manure will cause scab in the potatoes. Try to use compost that is 2 years old or more. The older the better. Adding compost to the soil is a good start for beneficial soil microbes.

The sugar in molasses is a good way to enhance the health of potatoes and the soil by feeding and multiplying the beneficial soil microbes. Fill a 5 gallon bucket with water and add one cup of molasses to soak for a day and night. Place the bucket in a hall or pathway so that you can stir it when you walk by several times that day. Apply the liquid molasses so that it soaks into the root zone of the potatoes. You can do this 1 to 4 times during the growing season.

Another benefit to increasing the population of beneficial microbes in your soil is that they will compete against the harmful soil fungus that causes scab. Amazing results!

## **Gophers**

Gophers can literally undermine your best potato crop. They are best kept in line by a strong patrol of hunting cats or dogs. Lacking that, trapping is effective. Good gopher traps can be bought at local feed stores. Several Jerusalem Artichoke growers have reported that the gophers prefer the Jerusalem Artichokes and will leave the potatoes alone.

## **Pest Control**

The Colorado potato beetle is the most widespread and destructive potato pest. Both adults and larvae feed on the leaves and stems, sometimes defoliating entire plants. Hand picking is a fine control, if the problem is small and you catch it early. Pick into containers, then smash them all at once. Beetles overwinter in the soil, especially at the edges of the garden. Rotating your potato crop is essential!

Plan a trap: as early in the spring as you can manage, set out eggplants near last year's potato patch. Beetles love eggplants, and over-wintering bugs will find your trap directly. Pick and destroy, and plant your potatoes later, in a new location.

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## Digging New Potatoes

In approximately 40 - 60 days after planting, the early potatoes may have blossomed. This is your sign that new potatoes may be ready, so carefully poke into the potato hill by hand to see what you can find. You may either "rob" from several plants, or simply harvest an entire plant from the end of your row. "Rob" gently to avoid injuring remaining roots and stressing the plant. They are delectable fresh treats creamed with new peas!



## Harvesting the Main Crop

For later varieties used for winter storage, the plants should be mature, the vines dead. Heavy frost will kill the vines, or, if your tubers are up to size and there's no frost in sight, you can mow them or cut them by hand with a sickle. Drier soil is definitely an advantage of harvesting potatoes.

When the vines are dead, leave the tubers in the ground for two weeks. The skins will "cure" or toughen, protecting them from scuffing and bruising during harvest. This will help prolong storage life. Minor injuries can heal if allowed to dry.

Harvest potatoes in the morning hours while it is still cool or warm - not hot. Or, if your soil is freezing at night, wait until the sun takes the frost out of the soil and then harvest. If hand digging, place your shovel outside the hill at first to avoid stabbing a good potato. If the soil is wet, let them air dry on the surface before gathering them. You can take the time to "field grade" your potatoes by sorting and discarding blemished, scabby, misshapen or injured tubers. Share a portion of your best potatoes with family, friends, and your local Food Bank, who will thank you for your generosity!

**As soon as a farmer can afford to do so, he moves to the city, and then, as soon as he can afford it, he gets himself a country place.**

**Unknown**

**God Almighty first planted a garden. And indeed, it is purest of all human pleasures.**

**-Francis Bacon**

## Potato Storage

For long term storage, potatoes keep best at 40 degrees Fahrenheit. Under good storage conditions, potatoes will keep for up to six months. Keep them dark. Light, as well as warmth, promotes sprouting and will also turn the potatoes green. We recommend burlap sacks, netted sacks, slotted crates or baskets for storing potatoes over winter.

Potatoes stored at 33 to 40 degrees Fahrenheit will likely convert their starch to sugars. These usually taste slightly sweeter but with their potato taste still intact. When these potatoes are fried, they tend to turn brown sooner. You can take the potatoes out of storage and keep them in the warmth, but out of the light, for a day or two and they will get some of their starch back. Storing potatoes at 50 degrees Fahrenheit will keep the starches intact. This will be the ideal temperature if you are going to fry the potatoes, make potato chips, or you prefer the starchier potato taste. However, they won't last as long in storage as the ones kept at 40 degrees.

Heaping them in piles is common in root cellars. But it is important to pile potatoes in several small piles rather than in one big heap. The bottom potatoes may be bruised by the weight of those on top. Large amounts tend to heat when ventilation can't reach the center of the pile, lowering quality and shortening storage life. Or set up shelving where containers can be "stacked" and still allow for good air circulation.

Humidity should be high (80 - 90%). Although potatoes lose moisture through respiration, low humidity is the main cause of shriveling in storage. We are always asked about refrigerator storage. It works well if you use the vegetable crisper and avoid dehydration. For the most part, refrigerators work hard at keeping the humidity low.

We understand not many of our customers actually have a working root cellar, yet they still want to keep their potatoes. Partially heated garages, sheds, closets, porches or back rooms are excellent sites for storage. Keep the area as cool as you can, protect from freezing, insulate in some way from your heated living space, and you can probably keep them a good while. Sometimes the crawl space is a good place to test out for storage. Just don't forget they are down there! They will either grow and find a crack to break out to the sunlight, or they will rot and smell up the place.

Most experts recommend keeping stored apples and potatoes separate, because apples give off ethylene gas, which promotes sprouting in potatoes. It's not always possible or practical to segregate potatoes from apples. We find ventilation is the answer. In a well-ventilated root cellar, the ethylene gas fumes are carried off by air currents instead of settling down around the potatoes. We've also found that storing apples with potatoes will tend to give the apples a potato taste. This is because the apples are "breathing" the same air. Bringing your apples out and leaving them on the kitchen table for a few days will eliminate the potato taste.