

Add Sprouting Seeds to Your Supplies

Billie Nicholson



Photo: RustyBuggy.com

Sprouts are one of the most concentrated natural sources for all life's building blocks. They are packed with vitamins, minerals, proteins, enzymes, amino-acids, and trace elements. Seed sprouting is a capability everyone has, no matter where you live. It is a simple technique and with only the need for clean water, requires no energy to prepare.¹ As a matter of fact, you can sprout seeds while you're on the move, if necessary and will create no cooking odor to give away your position.

For survival preparation and self reliance, there are few better foods. Sprouting seeds can be stored for a long time - up to four years at stable 70° F, and even longer if stored in a colder environment. From time to time we test our supply for viability simply by sprouting some. Buy them in bulk and package them yourself in glass canning jars with rubber ringed lids. These will keep out vermin.² Sprouted seeds increase in nutritional value exponentially over cooked dried seeds. Being natural nutrition, the components will fully penetrate the cell membranes and even help oxygenate cells. In a survival situation and you're hungry now, simply soaking seeds, nuts, grains or legumes in water for 30 minutes will activate some enzymes, increasing their nutritional value.³ Starch begins to disappear and is replaced by enzymes and an increased quality of protein, fat, certain amino acids, total sugar and B-group vitamins appear.⁴

Sprout different types of seeds to add more variety into your diet. In addition to good nutrition, many studies are showing that they have health benefits to protect us from diseases. Some sprouts have components that lower bad cholesterol and fat. Others offer protection against cancers. Alfalfa, broccoli and soybeans have been extensively studied.⁵

[Preparedness Pro](#) recommends 15 pounds of veggie seeds and 5-6 pounds protein seeds per adult for a year's supply. For more information on how to start sprouting, see [Sprouting 101](#).

[References](#)

Ask Billie



Alan from Florida

Asks: Is there a way to heat water for bathing?

A. You can harvest the sun's energy for bathing by using the [Solar Shower](#). This black PVC bag can be filled with water and hung in sunlight to capture the sun's energy to heat the water for washing. This unit has a handy on/off valve and shower head to control usage. Water will stay warm for up to three hours after heating. The five gallons of water will provide 11 minutes of non-stop shower time. This is a handy item to include in your camping gear, during an electrical system outage or if your home hot water heater breaks.

What is your Most Burning Question about Food Storage or Emergency Preparedness? Send your questions to editor@sunoven.com



Billie Nicholson



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How Bleach Kills Germs

French Chemist and pharmacist, Antoine-Germain Labarraque, is credited with formulating a solution of sodium hypochlorite (commonly called bleach) widely used as a disinfectant and deodorizer. In 1824, he was called to the death bed of King Louis XVIII, who suffered from extensive gangrene. The body emitted a foul odor long before death, which the chemist was able to remove by covering the body with a sheet soaked in chlorinated water. Long before the germ theory of infection, his solutions of sodium and calcium hypochlorite were used to disinfect and deodorize latrines, sewers, slaughter houses and morgues.¹ The first recorded use of chlorine bleach as a medical disinfectant was recorded at the Vienna (Austria) General Hospital when staff began using it to keep “childbed fever,” a severe infection that killed countless women after they gave birth, from spreading throughout the maternity ward.² During World War I, a diluted solution was used for open wound irrigation and is still in use today as an effective treatment against multiple antibiotic resistant bacteria. It is also used to disinfect dialysis equipment, some surgical equipment, surfaces in hospitals and medical labs, and even some medical waste.

The effectiveness of bleach as a broad spectrum disinfectant has been known for nearly 200 years. In 2008, Ursula Jakob led a research team that discovered why. It seems that hypochlorous acid, the active ingredient in bleach attacks proteins in bacteria, causing them to clump up much like a boiled egg. The researchers were studying a bacterial protein called heat shock protein 33. This protein becomes active when cells are in distress, similar to that of a high fever. When the researchers exposed the bacteria to bleach, the heat shock protein became active in an attempt to protect other proteins in the bacteria from losing their chemical structure. Many of these proteins are essential for bacterial growth. Inactivating them will likely kill the bacteria. Further, they discovered that in response to infection, the human immune system produces a strong oxidizer, hypochlorous acid, generated by white blood cells, which helps destroy bacteria.³

In addition to disinfecting surfaces, bleach is often stored to be used to disinfect water in a disaster situation. The problem is that bleach degrades quickly. Clorox Bleach representatives recommend storage for about 6 months at temperatures between 50 and 70° F. After this time, it begins to degrade at the rate of 20% each year and could end up as salt water.⁴ Instead of storing liquid bleach, store calcium hypochlorite in granular form. Pure calcium hypochlorite, is one of the best chemical disinfectants for water. It destroys yeast, other fungi, and viruses as well as bacteria. A 1-pound bag will treat up to 10,000 gallons of drinking water.⁵

References

Sun Oven Seminars

Mark Your Calendars AND Tell All Your Friends Sun Oven is Coming to a Town Near You!

March 28-29 Get Prepared EXPO (<http://www.usaprepares.com/get-prepared-expo/seminars>)

Cowan Civic Center,

500 E. Elm Street, Lebanon, MO

There is an admission to the expo. The Sun Oven Seminars are free.

April 11-12 Mother Earth News Fair Asheville, N.C.

(<http://www.motherearthnews.com/fair/north-carolina.aspx>) To Order tickets Sun Oven Cooking Demos FREE

Western North Carolina Agricultural Center

1301 Fanning Bridge Road,

Fletcher, NC 28732

Salt - Fact or Fiction

Billie Nicholson



Himalayan Pink Salt (photo:Wikipedia)



Salt crystals (photo:Wikipedia)



Sea Salt harvest (photo:Wikipedia)

- Salt is one of the most precious natural compounds known to man. The word salt comes from the Latin word for salary - when people were actually paid in salt.¹
- Table salt is composed of 97.5% sodium chloride. It is dried at more than 1,200° F. which separates out other naturally occurring minerals, making it a toxic compound to the human body.²
- For the body to metabolize chemical table salt, it must waste tremendous amounts of energy to keep the body at optimum fluid balance - 20 grams of cellular water for each gram of table salt.²
- Americans consume over 5 grams of sodium chloride per day. Much of this is found in pre-processed foods, used as a flavor enhancer. Doctors recommend diets much lower than this.²
- Crystal salt like Pink Himalayan and Artisan salt contain 84 trace elements that are vital to health. They are alkaline minerals that help keep us hydrated, balance sodium-potassium ratios and include electrolytes.³
- Iodine was added to salt during production in America around 1924, at the request of government initiatives, due to iodine deficiency disorders. Lack of iodine had been related to thyroid disorders resulting in goiters (enlarged growths in the neck) and in mental deficiencies in newborns.⁴
- Recent research into iodine levels in 80 types of iodized salt brands showed that only 20% have enough of the micronutrient to be considered enough for daily level consumption.⁴
- Benefits of consuming sea salt include building a strong immune system, enhancing digestion, reducing inflammation in the respiratory system, enhance heart health, prevent osteoporosis, and preserve hormones that help you deal with stress.⁵

The literature is filled with conflicting information. Is it good for you or not?

References

Onions - More Benefits Than You Know

Billie Nicholson



Photo: MedicalNewsToday.com

The distinctive smell and taste of onions is found in every cuisine. Do you have a love/hate relationship with them? Does the aroma and flavor overcome the tears and onion breath? If you're in this dilemma, perhaps these benefits will persuade you to add the humble onion to your diet in a greater abundance.

Native to Asia and the Middle East, they have been cultivated for over five thousand years. Egyptians used them to pay pyramid workers and placed them in the tombs of kings. Their pungency made onions popular

among poor people around the world who used them to spark up their often bland meals. Christopher Columbus took them to the West Indies, from there onions spread throughout the Western Hemisphere.¹ In addition to their use in culinary circles, numerous scientific studies have confirmed onions contain many beneficial ingredients. While low in calories, they are high in nutrients like vitamins, minerals, and antioxidants.²

Possible health benefits:

Immune System - Onions have antibiotic, antiseptic and antimicrobial properties that fight infections. A mixture of onion juice and honey can cure most common colds, coughs and sore throats. The phytochemicals in onions improve the function of Vitamin C in the body.³

Anti-Inflammation - *Onionin A* - a unique sulfur molecule found in onion bulbs has been shown to inhibit the activity of macrophages, specialized white blood cells that play a role triggering large-scale inflammatory responses. *Quercetin*, an antioxidant present in red and yellow onions, prevents the oxidation of fatty acids, also controlling our level of inflammation.¹

Insect Stings and Bites - Onions can be used to soothe stings and bug bites. In Florida where we live, fire ants are a real pest. Their formic acid stings are unbearable. Bruised onion slices smeared on those stings is the most relieving concoction I've ever used.

Heart Health - The bad cholesterol that causes heart problems may be reduced if raw onions are consumed daily. In animal studies, there is evidence that onion's sulfur compounds may work in an anti-clotting capacity, preventing the unwanted clumping of blood platelets and improving cell membrane function in red blood cells.⁴

Cancer - *Allium* (onion family) vegetables have been studied extensively in stomach and colorectal cancer research. Possible hypotheses to explain the mechanisms by which these compounds inhibit cancer included the inhibition of tumor growth, mutagenesis and prevention of free radical formation because of their high antioxidant vitamin C content. Researchers recommend consuming 1/2 onion 1-2 times per week.

Skin and Hair - Vitamins A, C, and E are needed to build and maintain collagen, which provides structure to skin and hair. Both consumption and topical application can provide numerous benefits. Onion is one of the richest sources of *Quercetin*, a powerful antioxidant. Massaging your skin with fresh onion juice helps increase blood circulation and improves the overall appearance. 1 TBS of onion juice and 1 TBS of olive oil applied to your face for 20 minutes, then washed off helps protect your skin from acne-causing bacteria and other skin infections.⁴

Now is the time to pick up onion sets to plant during the last quarter of the next moon phase. (April 10-11) You'll be glad you did.

References

Veggie Balls for Pasta from the Solar Chef



Serve these over spaghetti with your favorite tomato sauce or use them in meatless ball sandwiches. Double the recipe and freeze half (before baking) for future use.

Mini- Lentil Meatballs*

INGREDIENTS

- 1 cup dry lentils, picked over and rinsed
(editor's note: soak overnight & sprout lentils for 24 hrs to enhance protein value)
- 1 tablespoon olive oil
- 1/2 onion, finely chopped
- 1 carrot, finely chopped
- 1 stalk celery, finely chopped
- 1 clove garlic, minced
- 1/2 teaspoon dried thyme
- 1 tablespoon tomato paste
- 1 teaspoon salt
- 4 ounces mushrooms, thinly sliced
- 1 large egg, lightly beaten
- 1/4 cup freshly grated Parmesan cheese
- 1/4 to 1/2 cup dried bread crumbs
- 1/4 cup chopped flat-leaf parsley

PREPARATIONS

Set Sun Oven out to preheat. Spray two mini-muffin pans with cooking spray, set aside.

Put the lentils in a pot with enough water to cover them by an inch (use very hot water for faster cooking) cover and cook in the Sun Oven until soft but not mushy, 35 to 45 minutes. Drain and let cool. Leave the Sun Oven out.

Heat the oil in a large skillet over medium-high heat. Add the onion, carrot, celery, garlic, thyme, and salt. Cook, stirring often, until softened, about 5 minutes. Stir in the tomato paste and continue cooking for about 3 minutes. Add the mushrooms and cook until softened and the all the liquid has been absorbed, about 15 minutes. Transfer the vegetables to a large bowl and let cool. When the vegetables are cool add the lentils followed by the egg, cheese, 1/4 cup of the bread crumbs, parsley, and walnuts. If the mixture is too moist add more bread crumbs as needed. 2 Use your hands to mix until all the ingredients are well combined. Refrigerate the mixture for 25 minutes.

Roll the mixture into balls and place them in the prepared mini-muffin pans. Use a rack to separate the two pans and stack them in the Sun Oven. Bake until firm, about 45 minutes. Let rest in pans before serving.

* Adapted for the Sun Oven® from "The Meatball Shop"



Photo [WD-40](#)

Every Day Uses for WD-40

In 1953 the Rocket Chemical Company's staff of three set out to create a line of rust-prevention solvents and degreasers for use in the aerospace industry.¹ It took 40 tries to create the water displacement formula known today as WD-40. Aerospace contractor, Convair, used it to protect the outer skin of the Atlas missile from corrosion and rust. Their employees were so impressed that they took some WD-40 home with them. Founder Norm Larsen began putting WD-40 into aerosol cans for home use in 1958. And the rest is history, as they say.

Following Hurricane Carla, the first large order for WD-40 was sent to the U.S. Gulf Coast to recondition flood and rain damaged vehicles and equipment. Goodwill kits containing WD-40 were sent to soldiers in Vietnam to prevent moisture damage on firearms and keep them in good working order. By 1993, WD-40 was found in 4 out of 5 American households. How about yours? We have several cans in a variety of dispensers, in addition to the aerosol spray, we also use the Smart Straw can for carefully applying it to small areas. You can even buy WD-40 in 55

gallon drums. Over the years, satisfied customers have written testimonial letters sharing yet another use for this amazing product. Their web site has a [2000 Uses pdf](#) available for download. You may have heard it said, "You only need two things in life: Duct Tape and WD-40. If it moves and shouldn't, use Duct Tape, if it doesn't move and should, use WD-40."²

This product is a must have for your survival stash. Here are some reasons why.

1. It is great for removing grease, gum and other sticky messes.
2. Use it on garden tools. It will prevent rust and the dirt slides right off. Great for lubricating shears and clippers. Cleans and protects the bed of wheelbarrows and lubricates gate or shop locks exposed to weather.
3. To keep you from attempted murder charges against your kids and spending the rest of your life in prison, it removes crayon from the most aggravating places like the inside of your clothes dryer, wall paper, carpet, television screen, and compressed wood furniture.
4. Great for cleaning fiberglass sinks and tubs, patio door glide strip, scuff marks from ceramic tile floors, and even doggie-doo from tennis shoes.
5. Protects snow shovels from the effects of salt. Also snow slides right off saving lots of grief. Give your shovel a squirt when you're finished for the shoveling season, too.
6. Removes the sticky from price stickers and other labels, even those on the bottom of new shoes.
7. Spray down the sink or tub drain throat to remove scum.
8. Coat the outside pipes during winter to help prevent freezing damage or pipe bursts.
9. Spray around the bottom of garbage cans to keep critters from getting in.

References

Sun Ovens® Teach Solar Energy Concepts

Share With Teachers You Know

Solar energy is created by nuclear fusion that takes place in the sun when protons of hydrogen atoms collide in the sun's core and fuse to create a helium atom. This process emits an enormous amount of energy. Solar energy is constantly flowing away from the sun, into the solar system and reaching planet earth. This is the energy that warms the earth, causes wind and weather, and sustains plant and animal life. Most heat from the sun arrives on earth in the form of infrared radiation. Together with

visible light and ultraviolet radiation, these energy waves take part in the process of warming the planet. Solar energy is an unlimited resource. Many technologies can harvest it for use in homes, businesses, schools and hospitals.¹

A great deal can be learned by studying how the sun's energy can be collected and stored for useful purposes. Thousands of school children around the world have used **SUN OVENS®** in hands-on activities and fun experiments to learn the science behind solar cooking.

SUN OVENS® help students to learn about the concepts of insulation, reflection, absorption, conduction and convection as they experiment with alternative energy uses by harnessing the power of the sun. The results of the solar cookers the students build are often compared to the results of cooking in a **SUN OVEN®** to help students gain a better understanding of the power of solar energy.

SUN OVENS® are the only type of solar cooker which get hot enough to cook a meal or bake a batch of cookies in one class period. 4 layers of cookies can be baked using a Multi-Level Baking Rack Set.

As a service to science and engineering teachers, **SUN OVENS®** International has put together a [Solar Cooking Curriculum Resource](#) page on our website. In addition, to help teachers acquire all the accessories needed for teaching solar cooking, we have created an [Educators Package](#).

Learn More

1. http://education.nationalgeographic.com/education/encyclopedia/solar-energy/?ar_a=1

Starting Seeds and Caring for Seedlings

Billie Nicholson edited from Presentation by Jason Matyas of [Seeds for Generations](#)

If you're getting the gardening itch, now is the time to start getting plans together. Depending on where you live, the ground may still be frozen or covered with snow right now, but before you know it, spring will be here. The official vernal equinox is 20 March, 2015 in the northern hemisphere. This means night and day are nearly the same length, 12 hours, all over the world. This is also the day the sun crosses the celestial equator from south to north.



Photo: [LuAnnKessi](#)

Growing your own food requires some advanced planning. When you start thinking about a garden there are some constraints to keep in mind. First is garden space. How much do you have, how many types of plants will you want to fit into your garden space and then how many of a given type will you plant? Two other considerations to think about are how long is your growing season and how long will it take for the types of plants you've selected to reach harvest maturity? Often we want to get a jump start on the growing season by starting seedlings inside. Where do you start? Here are some thoughts to keep in mind.

Plants need soil, water and light. Growing plants inside, you will be responsible for all three. In an indoor environment temperature will be important. Some plants need higher temperatures in order to germinate. Warming mats can help this. The amount of light is important, too, to avoid tall, spindly (weak) plants. Water needs to be consistent but not too much. Place your seedling trays next to a south facing window or set up commercial/fluorescent shop lights whose distance from the plants can be adjusted as plants get taller. Use a timer to control length of time, set it for 16 hours of light. If you don't have enough window space for your trays, build a stand.

When you are getting seeds, you need to know how much space you will have in your garden and calculate how many seeds of each variety you need to plant. Study the planting guide printed on each seed packet. Take your total garden space, determine the required plant spacing, multiply by the number of plants and by the row spacing suggested. The reason you need to do this: so you don't start more seedlings than the space you have available.

You will need trays like the "1020" ones sealed on the bottom to collect water run off. To this you'll add planting cells to hold individual plants. Growing medium can be made by mixing 4 parts of compost, screen sifted to remove sticks and other large debris, 1 part perlite, 1 part vermiculite and 2 parts sphagnum peat moss or coir (shredded coconut shell). Once seeds are planted, keep the soil moist by watering from the bottom. Check regularly for dryness; don't over water.

As seedlings grow, keep track of them. Help plants get used to the outside by setting them outside in a sheltered location for a few hours during the day. Gradually increase sun exposure and decrease protection from cold at night. Be aware of when the last frost will occur in your area. Don't plant in the garden until this date or later.