

# COMPLETE SEED SPROUTING GUIDE





WELCOME TO YOUR
TRUE LEAF MARKET
SPROUTING GUIDE, A QUICK
POCKET REFERENCE FOR
THE STEPS, METHODS, AND
NUTRIENTS TO MORE THAN
THREE DOZEN SPROUTING SEEDS.
FOR MANY, THIS MAY BE A
REFRESHER OF BOTH CLASSIC AND
NEW SPROUTING VARIETIES. FOR
THOSE NEW TO SPROUTING,
WELCOME! YOU'LL NO DOUBT FIND
EVERYTHING HERE TO HELP TURN
YOU PRO IN NO TIME.

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# The ART of SPROUTING

One cup intuition, two scoops creativity, and a bucket full of fun, there is so much more that goes into sprouting than just seeds and water. Ask anyone with a green thumb and they'll tell you gardening is as much art and intuition as it is discipline or science. Countertop seed sprouting is certainly no different. Even those in the hard sciences such as medicine, physics, or mathematics will argue that their fields require as much artistry and imagination as anything else.

As a natural and crude product of nature, seeds are liable to the same abnormalities and uncertainties that we find in genetics, people, weather, and even natural disasters. We humans do our best to live safe from earthquakes, yet have failed to predict a single one. And while seed traits such as days to germination and harvest dates can offer more predictability than an earthquake, there are still many variables that affect even the tiniest seed from sprouting.

This booklet is intended to provide a basic understanding of more than three dozen sprouting seeds and their preferred methods that you'll no doubt encounter as you continue your apprenticeship in sprouting. Not only will you learn the seeds' very different personalities but you may also see a bit of yourself reflected in the process such as which seeds, methods, and flavors you prefer. Are you patient? Bitter? Spicy? Although reading this booklet cover to cover is one way to learn about sprouting, we invite you to get your hands wet and discover for yourself the art of sprouting.

# SPROUTS vs. MICROGREENS

Comparable to one another with more similarities than differences, seed sprouting is widely known to be far cleaner, easier, and more cost effective than microgreens. While microgreens require a grow medium such as soil or a grow mat (i.e. hemp, jute, bamboo), seed sprouting is 100% hydroponic and requires nothing more than clean rinsing water and a well-draining reusable container, typically a dishwasher safe sprouting tray, jar, or sack. Sprouting doesn't require any type of soil, disposable growing material, or grow lights and is considered to be the most efficient and waste-free method.

Some seeds, such as broccoli, mustard, and radish, will thrive as both a soil-based microgreen and a hydroponic sprout while others may perform best as either one or the other. We'll look at the differences of various seed types later on and which sprouting methods are best for each. Despite hydroponic sprouting being cleaner, cheaper, and easier, there is no secret that soil-based microgreening generally produces healthier and more robust sprouts, namely because seeds have thrived in soil for countless millennia. However, for not requiring any soil or sunlight during their 2-5 day lifespan, sprouting seeds promise all the same flavors, nutrients, and shorter harvesting windows as microgreens. Both sprouting seeds and microgreens seeds are ready to harvest in about 4-7 days, each providing up to 10-50x more vitamins and nutrients than fully mature vegetables.

# SPROUTING as SUPPLEMENT

We would need a book much larger than this to truly give sprouts their due credit as a dietary superfood. Like the fruits and vegetables they're grown into, each sprouting seed is brimming with their own unique blend of nutrients and phytochemicals proven to be invaluable to our daily health. First and foremost, sprouts are concentrated vegetables that contain anywhere from 10-50x more vitamins, minerals, and nutrients than vegetables grown to maturity. Raw sprouts are lower in calories than vegetables, averaging about 10-25 calories per serving, while protein-rich beans and legumes have more substantially fortifying calories.

Some sprouting seeds are grown as a dietary supplement for very specific vitamins or phytochemicals. Broccoli, for example, has popularly been grown in the garden for its unparalleled levels of sulforaphane, a phytochemical which studies have shown a heavy correlation to ridding the body of cancer-causing free radicals. Broccoli sprouts have proven to have anywhere from 50-100x more sulforaphane content than mature garden fresh heads of broccoli, while only requiring about 4 days to harvest as opposed to 90 in the garden. Protein-dense sprouting seeds such as adzuki, garbanzo, and mung each average about 30g protein per serving, an ideal source of plant protein for any diet. Both chia and Brussels sprouts seeds boast the same levels of Omega-3 fatty acids as pricey dietary fish oil pills.

Our body's first and primary line of defense against free radical (oxidant) attacks are antioxidants supplied in our diet. Antioxidants neutralize free radicals by attaching electrons to them, essentially "turning off" these free radicals and helping to deter the development of malignant, potentially cancerous cells. They go even further and are vital in nourishing, strengthening, and stimulating the immune system. Whether enzymes or plant pigments, nearly every part of a sprout can protect us from toxic and chemical build up.

Like other popular and easily accessible dietary powders, pills, and concentrates, raw sprouts are often treated as a daily supplement because they can be easily grown right on the kitchen counter, saving you money on expensive store bought products. In the back of this booklet you'll find an in-depth reference of the most popular vitamins, minerals, and phytochemicals you can expect to benefit from in your raw sprouts.



# CHOOSING your SPROUTING SEED

When choosing to begin sprouting, be sure to always buy specifically labeled "sprouting seed" or "seed for sprouting" which is often sold exclusively as organic, but not always. Seeds intended for outdoor garden use can sometimes be treated or coated to help withstand the conditions of a volatile and unpredictable spring. Smaller seeds such as clover are often sold as a convenient Multi-Seed Pellet (MSP), which lumps 5-7 seeds together in an inert clay pellet to help with easier outdoor sowing. Although this protective clay is helpful for gardening purposes, MSP and any pelleted seeds must never be used for indoor sprouting. The same rule applies to microgreens seeds, be sure to only buy pathogen-free seeds specifically labeled "microgreens seeds" or "for microgreens use".

While a popular sprouting seed like sunflower has nearly infinite garden cultivars to choose from such as Autumn Beauty, Teddy Bear, and Italian White to just name a few, none of these ornamental varieties are best suited for flavor or germination rates. When buying sunflower seed for sprouting or microgreens, you will notice that nearly all available sunflower seed is labeled "Black Oil" because this cultivar has proven to have the most flavor, oil content, and fewest days to germination. When purchasing sprouting seeds, trust that you're benefiting from decades of industry research that has decided the most optimal seeds for indoor sprouting.

As for the case of soybean, be sure to not only purchase "seed for sprouting" but also "organic" to guarantee that your soybeans have not been genetically modified (GMO). Soybean is one of the most controversial crops in the world and there is no secret that commercial soy production is heavily reliant on GMO seeds. Here at True Leaf Market, we pledge to never sell any GMO seeds, not even our soybeans.



# The BASICS



Before we explore the different sprouting methods, let's take a look at the first and most important step in the process, soaking. Whether sprouting using a tray, jar, or a bag, presoaking your seeds beforehand is the secret to thorough germination and a quick 3-4 day harvest on most varieties. The individual variety pages in this book each feature a recommended length of time (usually 4-6 hours) to initially presoak your seeds. These 4-6 hours spent soaking will help soften thick exterior shells and husks especially nuts, beans, and legumes to allow for immediate germination.

Soaking is the most important step in the process because it mimics outdoor garden conditions and the countless millennia seeds have relied on moisture to begin the germination process. Even the most difficult seeds such as avocado, buckeye, and the mighty 40-pound coco de mer seed requires heavy soaking and saturation to stimulate germination. Although this may be a new concept for home sprouters, experienced gardeners are well aware of the importance of letting their seed presoak overnight before sowing.

As we'll discuss in more depth later, mucilaginous sprouting seeds such as arugula, chia, flax, and cress naturally produce and excrete their own liquid (mucus) and should not be soaked prior to seeding.



### RINSING

Rinsing your sprouts 2-3 times daily during their brief growing period rids them of carbon dioxide and natural metabolic waste shed during germination. Without daily rinsing, this natural waste will quickly mold and spoil any sprout garden in just a matter of days. Most seeds are clean, stainless, and odorless and only require a light rinsing to wash away decaying microscopic material. Some seeds such as broccoli, fenugreek, and black bean, however, are notorious for their colorful, messy, and pungent by-products that seem to continuously wash away with every rinse. This is most noticeable after the initial 4-6 hour presoak. Inspect the water while rinsing and you will quickly learn for yourself the differences in habit between sprouting seeds.

We will discuss this simple rinsing process in further depth as we look at the individual sprouting methods but, for now, it's just important to understand why we rinse our sprouts. In addition to washing away carbon dioxide and decaying organic matter, rinsing helps to continue germination. While average room temperature water is ideal for the initial soak, cool rinse water is best to keep sprouts from overheating and spoiling.

And just like with presoaking, mucilaginous seeds such as arugula, chia, flax, and watercress excrete their own liquid (mucus) and should not be soaked and rinsed.

### SANITIZING

The most convenient thing about sprouting is the minimal cleanup and preparation for the next crop. Unlike soil-based microgreens, seed sprouting doesn't produce any waste and all of the sprouting materials are dishwasher safe. Although it is widely known that 7-10 day soil-based microgreens produce more robust shoots than 2-5 day hydroponic sprouting, most would agree that the minimal cleanup, waste, and sanitizing is well worth the trade.

Whether using a sprouting tray, jar, hemp bag, or even terra cotta saucer, be sure that the sprouting medium is properly sanitized to help minimize residual mold and bacteria. Many online resources are quick to recommend warm water and unscented bleach as the best means to sanitize sprouting materials. And while they're absolutely right, others will argue against the regular use of bleach on sprouting materials because of the noxious chemical scented buildup, especially in plastic trays, which ultimately may affect flavor. Popular alternatives are standard 3% hydrogen peroxide and citric acid concentrates, most commonly grapefruit.

Traditional warm soapy water and a sponge is more than adequate to clean any tray or jar and has been my preferred sanitizing method for years. If sending your sprouting supplies through the dishwasher, be sure to hand scrub all surfaces with either a bristled brush or sponge to effectively wipe away bacterial contamination. As mentioned, all of these methods are dishwasher safe and even hemp sprouting bags can be safely tossed in the washing machine with the week's laundry.

Every batch of sprouts you grow will naturally shed decaying organic matter, metabolic waste, and carbon dioxide as part of the germination process. Properly sanitizing keeps this microscopic decomposition from spoiling future crops via bacterial contamination and foodborne illnesses.



# The METHODS

### TRAY METHOD

Difficulty: Easy

Dishwasher Safe: Yes

Features: Wide, shallow, stackable

Seed Type: Brassicas, grains, legumes, wheat, mixes

Along with the jar method, sprouting trays are one of the two most popular methods in the world. Sprouting trays conveniently stack on the kitchen counter, providing a wide and shallow all-in-one place for seeds to soak, rinse, drain, germinate, and grow. Except for true mucilaginous seeds, sprouting trays are the preferred method for nearly every type of seed. While the tray method is arguably the most convenient for home sprouting, it can't offer the immediate portability or storage of a jar. Because it's shallow and caters to wide visibility, the sprouting tray is arguably the best means to study and learn about the day-to-day habits, needs, and expectations of your sprouts. Plastic sprouting trays are clean, reusable, dishwasher safe, and create no landfill waste.

### SEEDING RATE IN A TRAY

The recommended seeding rates you'll find in the following pages are all intended for both the tray and jar methods, as we'll address the seeding rates for the bag and terra cotta methods later. This recommended seeding for sprout trays is intended to give your seeds the optimal amount of room to expand, drain, and aerate without risk of overcrowding or suffocating one another. As you become more experienced, you'll naturally make adjustments to the seeding rates based on your own preferences and appetite.

### SPROUT TRAY METHOD IN 4 STEPS

- Add dry seed to the tray and soak in cool to cold water.
   Each variety will have a different recommended seeding rate and length of presoak.
- After presoak, thoroughly rinse and keep covered.
   Longer 5-7 day sprouts benefit from some darkness while shorter 2-3 day varieties do not.
- 3. Rinse 2-3x daily, helping to rid sprouts of metabolic waste, carbon dioxide, and natural decomposition from germination. Some seeds require more daily rinses.
- Depending on variety, uncover and allow 12-24 hours of light before harvesting. Smaller salad sprouts benefit from the chlorophyll while larger beans do not.



### JAR METHOD

Difficulty: Easy

Dishwasher Safe: Yes

Features: Portable, compact, decorative

Seed Type: Brassicas, grains, legumes, wheat, mixes

Sprouting jars are the most popular method for compact and portable 2-6 day sprouts. Whether at home, work, or on the road, jars provide a decorative all-in-one place for seeds to soak, rinse, drain, germinate, and grow. Jars are ideal for salad sprouts, mixes, and legumes able to withstand the vigorous daily rinsings and, like the tray and bag methods, should not be used with mucilaginous seeds. Whether plastic or stainless steel, sprouting lids are sold almost exclusively for wide-mouth Mason jars and fine enough to catch even the smallest onion seed. Mason jars enclosed glass and create an incubating effect to help expedite germination. And just like the tray method, sprouting jars are always reusable, dishwasher safe, and create no landfill waste.

### SEEDING RATE IN A JAR

As mentioned earlier, the recommended seeding rates you'll find in these pages are all intended for both the tray and jar methods. This recommended seeding is intended to give your seeds the optimal amount of room to expand, drain, and aerate without risk of overcrowding or suffocating. As you become more familiar with the sprouting habits of various seeds, you'll naturally adjust the seeding rates based on your own preferences and appetite. Although you can comfortably sprout an entire cup of pea per jar, you may quickly learn that's just way too much for any one person.

### SPROUT JAR METHOD IN 4 STEPS

- Add dry seed to the jar and soak in cool to cold water.
   Each variety will have a different recommended seeding rate and length of presoak.
- After presoak, thoroughly rinse and keep covered.
   Longer 5-7 day sprouts benefit from some darkness while shorter 2-3 day varieties do not.
- 3. Rinse 2-3x daily, helping to rid sprouts of metabolic waste, carbon dioxide, and natural decomposition from germination. Some seeds require more daily rinses.
- Depending on variety, uncover and allow 12-24 hours of light before harvesting. Smaller salad sprouts benefit from the chlorophyll while larger beans do not.



### BAG METHOD

Difficulty: Medium

Dishwasher Safe: Yes

Features: Portable, compact, breathable

Seed Type: Beans, grains, legumes, wheat, large seeds

Although not nearly as popular today as sprouting trays or jars, the sprout bag method is actually one the first and most accessible means to sprouting. Sold almost exclusively as hemp fiber, sprout bags are clean, reusable, and safe for both dishwashers and washing machines. Despite being one of the oldest methods, the sprout bag is still preferred for sprouting much larger seeds such as garbanzo, pea, fava, pumpkin, and almond. Portable and compact, sprout bags are a durable substitute for fragile glass jars especially when camping or hiking. Sprout bags offer the most consistent drainage and air flow and may be comfortably sat or hung nearly anywhere for a quick drip dry. Sprout bags are not ideal for any seed that develops fine or delicate tails.

### SEEDING RATE IN A BAG

The shape, size, and depth of hemp sprout bags are not nearly as uniform as jars or trays and have some variables that will rely on a bit of intuition and trial and error. When experimenting with sprout bags for the first time, add a little less than the recommended seeding rate to learn the volume and draining habits of sprout bags. Although the seeding rates in this booklet largely pertain to tray and jar sprouting, they provide an excellent reference point as to the suggested maximum seeding rates for sprout bags.

### SPROUT BAG METHOD IN 4 STEPS

- Add dry seed to the sprout bag and soak in cool to cold water. Each variety will have a different recommended seeding rate and length of presoak.
- After presoak, thoroughly rinse seeds and allow to hang dry. Seeds grown in soil are naturally buried in the dark, which the hemp sprout bag helps to simulate.
- 3. Rinse 2-3x daily, helping to rid sprouts of metabolic waste, carbon dioxide, and natural decomposition from germination. Some seeds require more daily rinses.
- 4. Unlike smaller seeds and salad sprouts, the large beans and legumes sprouted in bags generally don't require any sunlight during the final 12-24 hours of growth.



### TERRA COTTA METHOD

Difficulty: Difficult

Dishwasher Safe: Yes

Features: Stackable, decorative, absorbent

Seed Type: Mucilaginous seeds such as arugula, chia, flax, and watercress

Also known widely as dry sprouting, the terra cotta method is undoubtedly the most difficult and lengthy means of sprouting, yet will quickly make a professional out of anyone patient enough and willing to try. Terra cotta saucers are a clay-based medium intended exclusively for the mucilaginous seeds such as arugula, chia, flax, and watercress. Mucilaginous seeds naturally excrete an organic mucilage (mucus) during germination and can only be sprouted on a surface as porous as terra cotta to absorb the excess. Because of their dormant moisture, mucilaginous seeds should never be soaked or rinsed during germination. Although dry sprouting may seem frustrating at first, it allows you access to a variety of exotic specialty sprouts that otherwise could not be enjoyed.

### SEEDING RATE ON TERRA COTTA

The seeding rates listed in the following pages are specifically intended for sprout trays and jars and have no bearing on the loose, intuitive nature in which mucilaginous seeds must be sprouted. Because terra cotta saucers are sold in a variety of sizes, the seeding rate must be learned through experience via numerous successful and unsuccessful attempts. Add one even layer of seed to the tray without any piling up. Mucilaginous seeds are small and full of static electricity, sometimes difficult to seed evenly.

### **TERRA COTTA METHOD IN 4 STEPS**

- Presoak the entire terra cotta saucer for 1-2 hours prior to seeding. Once saturated, hand dry the surface of the tray with a towel to provide the most even seeding possible.
- Place terra cotta on a completely flat surface and delicately add dry seed evenly across the tray. Softly mist seeds with a water bottle, being careful not to drip.
- Place the seeded tray in a shallow plate filled about half inch of water to keep tray saturated. Cover with plastic wrap or humidity dome and store in the dark.
- Continue to mist daily until harvest, removing plastic cover after 4-6 days. Remove from blackout for 12-24 hours of lighting when ready to harvest.



### VERTICAL METHOD Restaurant-Style

Difficulty: Medium

Dishwasher Safe: Yes

Features: Huge, uniform restaurant-style sprouts

Seed Type: Mung bean and soybean

Mistakenly referred to as *traditional* or *Asian-style* sprouts, the enormously straight, white, and uniform bean sprouts found in many Asian restaurants and cuisines are actually the result of commercialization and mass production, a Western advent rarely ever found anywhere near Asia. Unlike most seeds sprouted in trays or jars intended for vigorous rinsing and draining, restaurant-style mung and soy sprouts require a more passive rinsing method to ensure straight and uniform growth. Strainers, colanders, and even flower pots are ideal for vertical sprouting to best allow sprouts to thoroughly drain while growing upright and without disturbance.

### SEEDING RATE FOR VERTICAL METHOD

The loosest and most unconventional method of seed sprouting, vertical restaurant-style bean sprouts are best when grown in bulk. Begin with a single pound of dry mung or soybean to test for difficulty, passive watering methods, and days to harvest. As you become more familiar with this improvised method, you will soon be able to adjust seeding rates based on personal preference and appetite. Whether mung or soy, be sure to presoak for 6-8 hours.

### VERTICAL SPROUTING METHOD IN 4 STEPS

- Prepare a colander, strainer, or flower pot by lining the bottom with a layer of paper towels. Without too much worry for precision, add presoaked seed evenly across paper towels.
- Create a drip system to allow sprouts to passively drip dry. If sprouting in a colander, prop it over a larger bowl to collect runoff. If using a flower pot, most drip saucers should work.
- Once seeded in the colander, use a spray bottle to aggressively soak the seeds, keeping them stationary and immobile, allowing for straight and uniformed bean sprouts.
- Using a heavy towel, keep bean sprouts in complete blackout for sweeter, whiter sprouts. Continue to heavily douse 2-3 times daily until ready to harvest in about 4-5 days.



# SALAD and SANDWICH SPROUTS

### SALAD AND SANDWICH SPROUTS



The most diverse category of sprouting seeds and home to several international favorites, salad and sandwich sprouts offer some of the most popular varieties while boasting others you may have yet to try. Brassicas such as broccoli, cabbage, and mustard are in a renaissance as some of the healthiest sprouts for their exclusive and unparalleled sulforaphane content, tightening their grip on the health world.

Not nearly as popular as Brassicas, salad and sandwich sprouts also feature other garden favorites like arugula, onion, and radish. And just like in the spring garden bed, you can expect arugula and radish to sprout first, ready within days for a quick kick to any dish. Onion sprouts are much quicker to harvest than scallions or chives and deliver a far more subtle, nuanced flavor profile than garden-harvested onion.

While nearly 95% of all sprouting seeds are easily germinated in either a plastic tray, glass jar, or hemp bag, mucilaginous seeds such as arugula, chia, flax, and watercress can only germinate in porous and clay-based saucers such as terra cotta to compensate for the natural mucus excreted by the seeds. But don't let that intimidate you because they truly are a delicacy worth the extra effort.





Eruca sativa

### GETTING STARTED:

Arugula is one of the fastest maturing vegetables in the garden and has only recently garnered attention as a quick 4-7 day sprouting seed. Arugula seeds are mucilaginous that perform best via dry sprouting methods such as porous terra cotta saucers capable of absorbing the natural mucus excreted during germination. Check our methods section on Dry Spouting to discover the best tips and techniques for sprouting mucilaginous seeds.

### SPROUTING:

Arugula seeds are mucilaginous and should not be presoaked like other sprouting seeds but, instead, presoak the entire terra cotta saucer for 1-2 hours prior to seeding. Don't seed arugula too close together because arugula matures into thick, robust sprouts that quickly become too dense for the tray or saucer, often leading to mold and slime. Too many seeds in proximity excrete too much mucus for the terra cotta to comfortably absorb. Store in a dark place for 4-5 days while continuing to mist daily until sprouts are ready for direct sunlight.

DIFFICULTY: MEDIUM

RECOMMENDED SEEDING: SINGLE EVEN LAYER

PREFERRED METHOD: DRY SPROUTING

INITIAL SOAK: NO PRESOAK

RINSE FREQUENCY: NO RINSING

DAYS TO HARVEST: 4-7

CALORIES: -25 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-3, POTASSIUM. PHOSPHORUS, MAGNESIUM, CALCIUM, PROTEIN, FIBER, VITAMIN A, B-COMPLEX, C, CHI OROPHYLL

### READY TO EAT:

Arugula sprouts are ready to harvest within 4-7 days depending on preference of length, flavor, and chlorophyll. Arugula sprouts thrive from full sun and taste best with at least 12-24 hours of light prior to harvest. Sprouts will be lightly rooted in the porous terra cotta and are best clipped with scissors for harvesting. Don't let dry sprouting intimidate you because arugula is truly one of the easiest seeds to sprout in the kitchen or garden.



### **GETTING STARTED:**

Broccoli is an essential sprouting seed grown for unparalleled levels of sulforaphane, a compound linked to a multitude of health benefits. Clearly label your starts since seeds are nearly indistinguishable from cabbage and mustard. Broccoli is a small, soft-shell seed requiring a brief 4-6 hour soak to begin germination. Sprouting broccoli is temperature sensitive and germinates slower in winter than summer.

### **DIFFICULTY: MEDIUM**

RECOMMENDED SEEDING: 2 TBSP [1/8 cup]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 3-4 TIMES PER DAY

DAYS TO HARVEST: 5-7

CALORIES: -20 CALORIES PER CUP

PRIME NUTRIENTS: SULFORAPHANE, VITAMIN A, B-COMPLEX, C, E, POTASSIUM, PHOSPHORUS, CALCIUM, MAGNESIUM, FIBER. CHLOROPHYLL

### SPROUTING:

Sprouting broccoli is notorious for the very healthy, but very pungent, phytochemical sulforaphane which develops an unmistakable sulfur-like odor by day 4-6. Rinse 3-4x daily with cold water to keep broccoli sprouts clean of its robust smell as well as other metabolic wastes and carbon dioxide. Keep away from windows, vents, doors and any environmental factors that may affect temperature. Broccoli will sprout 3-4" long in its 5-7 days of growth and will require about 12-24 hours of sunlight before harvesting.

### READY TO EAT:

It's no secret that the overwhelming majority of people who sprout broccoli do so for the seemingly endless health benefits rather than flavor. Broccoli sprouts are light, thin, juicy, and crunchy and share a very similar profile to mature garden broccoli. Allow sprouts 12-24 hours of light before harvest. For optimal flavor, be sure to give sprouts one final and aggressive cold rinse to rid them of any excess decay and mucus just before serving.



### GETTING STARTED:

Be sure to properly label when sprouting because cabbage is a crucifer whose seed looks identical to kale, mustard, and broccoli. While mustard is known to be slightly mucilaginous and broccoli emits a notorious sulfur odor, cabbage is by comparison a clean, odorless, and hygienic seed. Cabbage quickly germinates with a 6-8 hour presoak and, like other salad sprouts, tastes best if kept away from light until the last 12-24 hours.

### SPROUTING:

Cruciferous vegetables like broccoli, mustard, and radish all have similar sprouting habits, appearances, and can all be sprouted following the same general guidelines. Cabbage germinates and harvests about a day sooner than broccoli, yet is able to boast all the same benefits. While cabbage is one of the most hygienic cruciferous sprouts, be sure to rinse 3-4 times daily to keep clean from stagnant metabolic waste, carbon dioxide, and sulforaphane. Don't expose cabbage sprouts to light until within 24 hours of harvesting.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 2 TBSP [1/8 cup]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 5-6

CALORIES: -35 CALORIES PER CUP

PRIME NUTRIENTS: SULFORAPHANE, VITAMIN A, B-COMPLEX, C, E, POTASSIUM, PHOSPHORUS, CALCIUM, MAGNESIUM, FIBER. CHLOROPHYLL

### READY TO EAT:

Similar to fully grown heads of cabbage, 5-6 day old sprouting cabbage is tame, mild, and subtle when compared to spicy mustard and pungent broccoli. Cabbage sprouts taste best when given about 12-24 hours of lighting before harvest, just enough time to turn the sprouts green and delicious. Sprouting cabbage is often compared to alfalfa as the ideal salad sprout because they easily adopt other flavors while their own is delicate and understated.







### GETTING STARTED:

Chia seeds are extremely small and nutritious, enjoyed as often raw as sprouted. As a member of the invasive mint family, chia seeds are just as durable and easily sprouted. Since chia seed is mucilaginous, see our **Dry Sprouting Method** to best understand chia and similar seeds requiring this method. Without presoaking, add one even layer of seeds to a terra cotta tray, misting heavily before storing in a dark place for about 2 days.

**DIFFICULTY: DIFFICULT** 

RECOMMENDED SEEDING: SINGLE EVEN LAYER

SPROUTING METHOD: DRY SPROUTING

INITIAL SOAK: NO PRESOAK

RINSE FREQUENCY: 1-2 TIMES PER DAY

DAYS TO HARVEST: 6-10

CALORIES: -40 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-3, FIBER, PRO-TEIN, CALCIUM, PHOSPHORUS, POTASSIUM, MAGNESIUM, VITAMIN A, B-COMPLEX, C, E, CHLOROPHYLL

### SPROUTING:

Keep sprouts moist but not saturated during the first 2 days in darkness, as clay-based saucers will absorb excess moisture naturally excreted during germination. Use a spray bottle to lightly mist seeds during first 3-4 days until roots have firmly established. Once seedlings develop at about 4 days, chia may be lightly rinsed and drained like traditional sprouting methods. Now that sprouts have established cotyledons nearly an inch tall, keep the saucer in full light for optimal flavor, color, and length.

### READY TO EAT:

Chia is ready to eat as early as 6-10 days depending on preference of length and flavor. Although chia sprouts can grow several inches tall, they taste sweetest when no longer than an inch. As with nearly any sprout, chia tastes best when younger and shorter before developing a bittering mature flavor on its way to becoming a full-grown flowering herb. Chia sprouts are herbal, tender, and subtle and share a similar note to cantaloupe microgreens.



Flax can be one of the most difficult seeds to sprout fully, requiring some trial and error before gaining the know-how to serve it with a meal. Flax-seed is mucilaginous and sprouts best on a clay-based or terra cotta saucer without any presoak. Add one even layer of dry flaxseed to the sprouting saucer and heavily mist before storing in the dark. Too much water will cause seeds to become gummy while not enough will prevent germination.

### SPROUTING:

Flax seed requires more creativity, intuition, and vision to sprout perhaps more than any other seed. Allow seeds to germinate in the dark for the first 2-3 days while keeping misted but not saturated. While other sprouts can be drenched and rinsed without care, flax sprouts are sensitive during these first 72 hours. After 2-3 days of germinating in the dark, allow seeds to continue sprouting in the light to develop green chlorophyll. Flax sprouts can be rinsed more thoroughly by day 5 as they develop more substantial roots.

**DIFFICULTY: DIFFICULT** 

RECOMMENDED SEEDING: SINGLE EVEN LAYER

SPROUTING METHOD: DRY SPROUTING

INITIAL SOAK: NO PRESOAK

RINSE FREQUENCY: ONCE PER DAY AFTER DAY 5

DAYS TO HARVEST: 6-8

CALORIES: ~125 CALORIES PER CLIP

PRIME NUTRIENTS: OMEGA-3, FIBER, PROTEIN, POTASSIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, IRON, VITAMIN B COMPLEX. E. CHLOROPHYLL

### READY TO EAT:

Just like other mucilaginous seeds, the extra effort is always worth it because flax has a uniquely subtle, clean, and delicate flavor. Flax sprouts are usually ready to harvest by 6-8 days and, despite being as green as wheatgrass, are nearly free of any bitter chlorophyll notes. Harvest flax sprouts like wheatgrass, clipping them from the root base which is known to be mucilaginous with a notorious "fishy" smell due to the high omega-3 content.



Mustard is cruciferous like broccoli and cabbage yet, unlike other crucifers, is slightly mucilaginous and the cause of disagreement as to its ideal sprouting method. Mustard can be grown as a true mucilaginous seed and sprouted on terra cotta, yet also germinates in a sprouting tray with no more than 2 they of dry seed. A lighter seeding rate allows space for mustard seeds to excrete natural mucilage (mucus) during sprouting.

### DIFFICULTY: MEDIUM

RECOMMENDED SEEDING: 2 TBSP [1/8 cup]

SPROUTING METHOD: TRAY OR TERRA COTTA

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 5-6

CALORIES: -35 CALORIES PER CUP

PRIME NUTRIENTS: SULFORAPHANE, VITAMINS A, B-COMPLEX, C, E, POTASSIUM, PHOSPHORUS, CALCIUM, MAGNESIUM, FIBER, CHLOROPHYLL

### SPROUTING:

If sprouting in a tray, allow seeds to soak for a brief 4-6 hours before covering. True mucilaginous seeds generally don't need presoaking, but mustard is only partially mucilaginous and still benefits from a light soak to expedite germination. Despite having slight mucilage, mustard is still a very clean and odorless seed only requiring an average 2-3 daily rinses. Be sure to rinse thoroughly to rid sprouts of natural mucus and metabolic wastes. Like other crucifers, allow sprouts 12-24 hours of light before harvesting.

### READY TO EAT:

Mustard sprouts are usually ready to eat in about as many days as broccoli, cabbage, or radish sprouts. Often compared to radish in terms of spiciness and zest, mustard sprouts boast a unique wasabi style of heat. Chlorophyll developed in the last 12-24 hours of sunlight provides a necessary pinch of bitterness as relief against the gradual wasabi. Since mustard is partially mucilaginous, be sure to dry off the slight excess mucus before serving.



Perhaps the longest seed to harvest at 10-14 days, onion is not necessarily a difficult seed to sprout as much as it is a patient one. Onion seeds are very small, delicate, and best when sprouted in either a tray or jar. If using the jar method, be sure to use a stainless steel lid to catch even the smallest seed. Onion seeds are rugged and hard-shelled, benefiting from a longer 6-8 hour presoak then covered from light during 10-14 day sprouting.

### SPROUTING:

Just like fully grown garden onions, small and delicate onion sprouts are known to take a little extra time on the countertop to mature and reach harvest than others. Despite a longer days to harvest, onion seeds are hygienic, odor-free, and nearly effortless other than the extra week of growth. Onion seeds produce no mucus or discoloration and only require a standard 2-3 daily rinses to keep clean. Like all other salad sprouts, onion is best kept in the dark during entire growth until the final 6-24 hours before harvest to develop chlorophyll.

### DIFFICULTY: MODERATE

RECOMMENDED SEEDING: 2 TBSP [1/8 cup]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 10-14

CALORIES: -25 CALORIES PER CUP

PRIME NUTRIENTS: FIBER, POTASSIUM, PHOSPHORUS, CALCIUM, MAGNESIUM, IRON, ZINC, PROTEIN, VITAMIN A, C, CHLOROPHYLL

### READY TO EAT:

Faster and easier to grow than winter onion, scallions, or chives, sprouting onion promises all the same robust flavors as its Allium relatives in less than two weeks. Onion sprouts boast a far more delicate and complex flavor profile than any garden onion or scallion could possibly offer. Depending on preference, onion sprouts can be enjoyed as early as 7-8 days if seeds are soft enough, or as late as 14 days for thickest and crunchiest sprouts.



Anyone who's grown radish in the garden knows it's always the first to germinate and usually the first to harvest after about only 35 days. Sprouting radish is just as vigorous and will even begin to sprout during the 6-8 hour presoak. Because radish sprouts grow several inches the first week, follow the recommended seeding to help sprouts from overcrowding and suffocating one another.

### SPROUTING:

For how quickly radish germinates and matures, it is a remarkably clean and odorless seed that hardly requires any attention during its brief 5-6 day sprouting. After the initial 6-8 hour presoak, continue to rinse 2-3 times daily while keeping sprouts stored in the dark. Once 4-5 days old and nearly 3" long, uncover radish sprouts to allow their last 24 hours in lighting, quickly filling developed cotyledons with chlorophyll. Regardless of light source, the earthy green chlorophyll provides a necessary balance to the notoriously zesty sprout.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 2 TBSP [1/8 cup]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 5-6

CALORIES: ~15 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-3, PROTEIN, PHOSPHORUS, POTASSIUM, CALCIUM, MAGNESIUM, ZINC, VITAMIN A, B COMPLEX, C, CHLOROPHYLL

### READY TO EAT:

Radish is quick to germinate and develop a 3" long sprout and, for many people, is ready to eat by as early as day 3-4. However, radish sprouts are most popularly harvested after 5-6 days with at least 12-24 hours of lighting during the final day. Radish sprouts have a robust zest and tanginess that is often likened to spicy mustard. While mustard sprouts have a distinct wasabi style heat, radish sprouts deliver a more complex, sophisticated spice.

WATERCRESS

Nasturtium officinale

### GETTING STARTED:

Delicate, nuanced, and sophisticated, watercress sprouts are undeniably the crème de la crème of the sprouting world for those courageous enough to try. Watercress is intended for experienced sprouters because it requires the terra cotta sprouting method for some very small, nearly weightless seeds. Do not presoak as you would with other sprouting seeds but, instead, presoak the terra cotta saucer at least an hour before seeding.

### SPROUTING:

Wipe the terra cotta saucer of excess water so the nearly weightless seeds don't puddle and sprout incorrectly. Spread an even layer across the saucer while limiting any bunching of seeds that could cause mold as the sprouts mature. Store the saucer in a dark space for 4-6 days while continuing to mist daily. By day 4-5 sprouts will develop soft roots grown into the porous terra cotta. Continue to mist as sprouts are now ready for indirect light. Direct light quickly dehydrates watercress and the terra cotta they're grown on.

DIFFICULTY: DIFFICULT

RECOMMENDED SEEDING: SINGLE EVEN

SPROUTING METHOD: DRY SPROUTING

INITIAL SOAK: NO PRESOAK

RINSE FREQUENCY: MIST ONCE PER DAY

DAYS TO HARVEST: 8-10

CALORIES: -5 CALORIES PER CUP

PRIME NUTRIENTS: VITAMIN A, B-COMPLEX, C, CALCIUM, POTASSIUM, PHOSPHORUS, MAGNESIUM, FIBER, CHLOROPHYLL

### READY TO EAT:

Watercress is ready to harvest within 7-10 days as wispy, delicate 2-3" long sprouts with a light touch of green chlorophyll. Sprouts will appear to have a black tip which is merely the softened and edible seed sitting on top of the growth. Be sure sprouts receive plenty of indirect light during the last 2-3 days so they develop flavorful green chlorophyll. Watercress is sprouted for its silky, elegant crunch and zesty notes of peppery sweetness.

# BEAN and EGUME SPROUTS

### BEAN AND LEGUME SPROUTS



Widely considered to be the beginner's sprouting seed, legume seeds are without doubt the easiest and most rewarding variety of sprout. Legume sprouts such as mung, alfalfa, and clover have introduced sprouting to an entirely new generation and are found in nearly every grocery store, restaurant, deli, and farmers' market. While mung, alfalfa, and clover sprouts have become mainstream sensations, they've helped pave the way for other protein-rich and irondense legumes garbanzo, fava, soy, and fenugreek.

Regardless of variety, sprouted legume seeds are rife with protein, fiber, and bone healthy earth minerals such as calcium, iron, magnesium, potassium, phosphorus, and zinc. Hardshell beans like adzuki and black turtle are often sprouted exclusively as a plant-based source of protein and essential trace minerals.

Fava, lentil, and garden pea have been widely popular well before the recent sprouting phenomena, but have been proven to perhaps be the most effortless of all sprouting seeds. Sweet, savory, and mild all at once, most sprouted legumes are ready to eat in just 2-3 days without mess or any real attention to detail.





Adzuki requires a little extra soaking for a 3-4 day harvest, especially if you're timing it with quicker salad sprouts. Adzuki benefits from a longer 8-12 hour presoak to soften the exterior shell for faster, more thorough germination. It's even recommended to give adzuki another 4-8 hour soak on the second day, especially if interested in a convenient 3 day harvest. Exterior red shell should begin to soften and split within 36 hours of presoak.

### SPROUTING:

As mentioned, it's best to give adzuki another 4-8 hour soaking on the second day when normally you'd begin the 2-3x daily rinse cycle. Unlike broccoli and fenugreek seeds, adzuki doesn't develop any type of smell or odor during sprouting, but should still always be thoroughly rinsed. However, like other colorful seeds, adzuki will naturally leach off its bright red color from the shell which must be rinsed away. Adzuki doesn't require sunlight during sprouting because mature green shoots shouldn't emerge until after the 3-4 day harvest window.

DIFFICULTY: MEDIUM

RECOMMENDED SEEDING: 4 TBSP (1/4 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 8-12 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 3-4

CALORIES: ~350 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, IRON, ZINC, VITAMIN A, B COMPLEX, OMEGA-6

### READY TO EAT:

Similar in taste to delicious alfalfa sprouts, adzuki is truly one of the tamest, sweetest, and most inviting sprouting seeds. Unlike most sprouting seeds which quickly develop 1-2" long sprout tails, adzuki won't develop much of a tail during these 3-4 days. Delicious and properly sprouted adzuki bean will have a soft and cracked exterior shell with only a hint of a sprouting tail. Anything longer will be far too starchy and bitter for eating.



Alfalfa is one of the most reliable and effortless sprouting seeds and its worldwide success has helped introduce sprouting to a new generation. Technically a legume, alfalfa is best treated as a salad sprout because of its similar growth habits to broccoli, cabbage, and radish. Alfalfa seed is small, soft-shelled, and only requires a quick 4-6 hour soak. Like salad sprouts, keep alfalfa away from light until the final 12-24 hours before harvest.

### SPROUTING:

Alfalfa is one of the cleanest and most hygienic sprouting seeds, only requiring 2-3 daily rinses while keeping sprouts protected from light. Rinse thoroughly with cold water to keep sprouts free of organic decomposition and metabolic waste from sprouting. Although seeding rate may seem light, alfalfa sprouts will expand in about 6 days, quickly filling the tray or jar to capacity. In the final 12-24 hours of sprouting, allow alfalfa lighting to develop green chlorophyll. Sprouts may grow entirely in the dark for sweeter, white alfalfa sprouts.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 2TBSP (1/8 CUP)

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 4-6

CALORIES: -25 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-3, POTASSIUM, PHOSPHORUS, CALCIUM, MAGNESIUM, IRON, ZINC, VITAMIN A, B-COMPLEX, C, CHLOROPHYLL

### READY TO EAT:

Nearly identical to its legume relative clover in flavor, appearance, and days to harvest, alfalfa is one of the sweetest and mildest sprouts. Like clover in both subtlety and sweetness, alfalfa also boasts a kick of chlorophyll that adds a welcomed touch of wheatgrass. Alfalfa is clean and fragrant, not requiring much rinsing before serving. Alfalfa sprouts are best harvested 2-3" long or at about 5-6 days with or without chlorophyll production.

# BLACK TURTLE BEAN



Phaseolus vulgaris

### **GETTING STARTED:**

Compared to sprouting seeds like alfalfa and fava which are practically effortless, black bean is known to require more attention such as a longer presoak time and more vigorous rinsing. Whether sprouting pinto, navy, or kidney, beans have a hard exterior shell requiring an 8-12 hour presoak, even up to 24 hours if sprouting for cooking or refried use. Careful when draining because water will be stained black from leaching of the shell.

**DIFFICULTY: MEDIUM** 

RECOMMENDED SEEDING: 8 TBSP [1/2 CUP]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 8-12 HOLIRS

RINSE FREQUENCY: 3-4 TIMES PER DAY

DAYS TO HARVEST: 3-5

CALORIES: ~160 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-3, OMEGA-6, PROTEIN, FIBER, POTASSIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, IRON, ZINC, VITAMIN A. B-COMPLEX

### SPROUTING:

Beans do not produce long, thin sprout tails and are ideal for sprouting trays, jars, or bags. As mentioned, black bean is notorious for high levels of decaying organic matter during sprouting such as excessive carbon dioxide and natural black dye capable of staining clothing and surfaces. After the initial presoak, be sure to rinse aggressively 3-4 times per day, possibly even 5, to keep clean and odor-free. You may see the water bubble as if carbonated, which is caused by an excess of carbon dioxide gas.

### READY TO EAT:

If sprouting overnight for traditional refried use, beans should be ready to cook in less than 24 hours. If sprouting for raw use, black bean is best harvested in 3-5 days. Black bean doesn't produce much of a sprout tail when ready to eat (½" long) but will adopt more of a burgundy look since much of the black exterior will have been rinsed off. Unlike many beans which can be described as mild and nutty, black bean is bright, aromatic, and hold



Trifolium incarnatum



### GETTING STARTED:

Often compared to alfalfa in terms of flavor, appearance, and ease of growing, clover is truly one of the simplest and most rewarding sprouting seeds. Whether using the tray or jar method, do not use more than the recommended seeding because, like alfalfa, clover will quickly expand to capacity. Clover seeds are clean and hygienic without any unnecessary odors or mucus.

Continue to keep clover seeds covered until about 12-24 hours before harvest.

### SPROUTING:

Clover sprouts expand as plentifully as alfalfa and best if sprouted in either a tray or jar. Clover is quick to germinate and will even begin to do so during the 4-6 hour presoak. Unlike broccoli or fenugreek, clover is free from staining, mucilage, or pungent odors and only requires 2-3 cold rinses per day to stay fresh. Keep clover sprouts protected from light throughout their 4-6 day growth until about 12-24 hours from harvest, allowing them to develop a sweet hint of chlorophyll. Sprouts will only reach about 1" long when ready to harvest.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 2 TBSP [1/8 CUP]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 4-6

CALORIES: -35 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-3, PROTEIN, FIBER, CALCIUM, IRON, MAGNESIUM, MANGANESE, VITAMINS A, B-COMPLEX, C, CHLOROPHYLL

### READY TO EAT:

Shorter and more subtle than its legume counterpart alfalfa, sprouted clover is very comparable to one of the most popular sprouts ever. Chlorophyll developed during the final day of sprouting lends a sweet hint of earthy oat and wheatgrass. Clover is best when about 1-2" because sprouts will bitter and become too fibrous as they soon mature into a forage crop. Sprouts are hygienic and mucus-free, only requiring a light cold rinse before serving.



Not all fava beans are equal and, if deciding to try fava as a sprout, be sure to only ever purchase fava beans specifically labeled for sprouting use", often only available as an organic option. Fava sprouting seeds are thin-shelled and medium-sized, much smaller than other varieties of fava intended for garden use. Fava is nearly effortless to germinate and, as a slightly larger seed, is perfectly suited for either a sprouting tray, jar, or bag.

### SPROUTING:

Fava is definitely one of the easier sprouts you may ever try and, with only the recommended 2-3x daily rinsings, fava should be ready to eat as soon as 48 hours. Similar to other sprouting legumes such as garbanzo, fava will only develop a slight tail about ½" long during rinsing. Fava is a very clean sprouting legume and does not excrete any unpleasant odors, colors, or mucus during sprouting. Watch for any yellowing of the sprout tail as a sign of maturity. This slight yellowing usually is most noticeable by day 3 and should be eaten soon.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 8 TBSP (1/2 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: -340 CALORIES PER CUP

PRIME NUTRIENTS: OMEGA-6, PROTEIN, FIBER, POTASSIUM, PHOSPHORUS, MAGNE-SIUM, CALCIUM, IRON, ZINC, VITAMIN A, B COMPLEX, C

### READY TO EAT:

Fava bean is one of the fastest, easiest, and most rewarding sprouts you'll ever grow. Fava is sweet, creamy, and mild without any starchy aftertaste often associated with even the most delicious of beans. Harvest fava sprouts no more than 2-3 days from the initial soaking or before the small sprout tail begins to mature and develop color. Exterior is soft and edible during the first 48 hours, becoming more fibrous and coarse by as early as day 3.



Trigonella foenum-graecum



### **GETTING STARTED:**

The first thing you'll notice about fenugreek is its unmistakable maple aroma. Fenugreek is a smaller legume seed and sprouts best using either a tray or jar method. Soft and thinshelled, fenugreek only needs a 4-6 hour presoak to germinate. Despite its sugary aroma, fenugreek is known for heavy organic waste during germination in the form of carbon dioxide and a robust yellow runoff. Keep seeds covered for sweeter, whiter sprouts.

### DIFFICULTY: MEDIUM

RECOMMENDED SEEDING: 2 TBSP [1/8 CUP]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 3-4 TIMES PER DAY

DAYS TO HARVEST: 2-5

CALORIES: ~55 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, IRON, POTASSIUM, MANGANESE, FIBER, VITAMIN

B-COMPLEX

### SPROUTING:

After the initial 4-6 hour soak, be sure to rinse fenugreek vigorously to wash away carbon dioxide and yellow waste excreted during germination. During the next 2-5 days, continue to rinse sprouts 3-4 times daily, or even 5, to keep them clean, odorless, and free from developing mold. Careful when draining, as the yellow-dyed water may stain clothing and surfaces. Fenugreek quickly develops 1-2" long sprout tails by day 3-4, similar in appearance to mung bean. Fenugreek sprouts are best if covered from sunlight during the entire 2-5 day growth.

### READY TO EAT:

Fenugreek sprouts can be enjoyed from 2-5 days with sprout tails anywhere from 1-3" long. Allowing sprouts sunlight on day 4 or 5 will enable them to develop healthy green chlorophyll, though becoming more bitter than sprouts left in the dark. While raw fenugreek seeds smell exactly like maple, sprouted fenugreek boasts more savory notes without any hint of sugar. Fenugreek's subtle bitterness is attributed to its high dietary iron content.



Cicer arietinum

### GETTING STARTED:

Also known as chickpea, the garbanzo bean is one of the sweetest and most popular sprouting legumes. Unlike most sprouting beans, garbanzo doesn't have much of a shell and is effortless to germinate, only needing an average 4-6 hour presoak to be saturated enough for sprouting. Since garbanzo is a larger seed without any significant sprout tail, it's an ideal candidate for hemp bags, yet still germinates in both trays and jars.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 8 TBSP (1/2 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: -160 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, VITAMINS C. B-COMPLEX

### SPROUTING:

Along with several other legumes, garbanzo is recommended for beginners as a foolproof introduction. After the initial 4-6 hour presoak, garbanzo only needs a minimum 2-3 daily rinses over the next 48 hours until ready to eat. Garbanzo seeds should be covered away from light, although sprouts are ready to harvest so quickly there shouldn't be much worry of developing chlorophyll. Like lentil and fava, garbanzo bean is a clean and odorless seed that doesn't require any additional rinsing.

### READY TO EAT:

Garbanzo softens easily and is more than ready to snack on in about 48 hours. If quickly sprouting for a stew, garbanzo should be ready after a 4-6 hour soak. Garbanzo has a subtly sweet perfuming taste with slight maple notes similar to its legume relative, fenugreek. Creamy, soft, and lightly sugary, sprouted garbanzo does not produce a sprout tail and stays rounded; an ideal substitute for overly processed finger foods devoid of any nutrition.



Lentil is the ideal beginner sprout and a great way to introduce anyone to the simple steps of home sprouting. Lentil is a smaller legume and shouldn't have any split or broken seeds that need removal. Seeds are soft-shelled and only require a 4-6 hour presoak to begin germination. Clean, odorless, and without a hard exterior, lentil rinses without any mess. Because it is a smaller seed with a longer sprout tail, lentil is best for trays and jars.

### SPROUTING:

Lentil should begin to germinate as soon as 4-6 hour presoak is over. Continue to rinse sprouts 2-3 times per day to help maintain growth while rinsing away organic decomposition naturally left behind in the sprouting process. While it's usually recommended to keep sprouts covered, lentil can be exposed to light because it will be harvested before developing chlorophyll. Small sprouting tails will begin to emerge within 48 hours and will be most defined within 72 hours. If sprouting lentil for cooking, presoak and rinse once for immediate use.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 2 TBSP (1/8 CUP)

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: ~105 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, ZINC, MANGANESE, VITAMIN C, B-COMPLEX

### READY TO EAT:

Not only is lentil one of the easiest sprouts, it truly is one of the most delicious, boasting mild and creamy notes not too dissimilar to sprouted almond. If sprouting for cooking, lentil is properly germinated and ready after the 4-6 hour soak. If sprouting for raw use, then lentil is most tender and delicious within 48-72 hours of presoak. Lentil sprouts are clean, odorless, and stain-free and develop a 1" sprout tail at the peak of freshness.





Vigna radiata

### GETTING STARTED:

Mung is the sprout that started it all and arguably the most familiar ever, found in nearly every restaurant, grocery store, and deli counter. Mung bean has a thin shell and readily germinates after an initial 4-6 hour presoak. Although many legumes do well in sprout bags, mung is a smaller seed and best if sprouted in a tray or jar. After soaking, keep mung sprouts covered until harvest to keep sweet and mellow without any chlorophyll.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 4 TBSP (1/4 CUP)

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-4

CALORIES: -30 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, VITAMINS C. B-COMPLEX

### SPROUTING:

Mung is clean, odorless, and easily maintained in the kitchen, only requiring an average 2-3 daily rinses. While other colorful seeds such as adzuki will bleed their color during rinsing, mung is stainless, hygienic, and even without a gummy mucilage. Unlike many sprouting seeds that have an optimal peak of flavor, mung can be eaten in as early as 48 hours or, for even bigger and crunchier sprouts, harvest as late as 5-6 days for Vietnamese Pho-style sprouts. For best flavor, cover from light during 2-6 day rinsing.

### READY TO EAT:

Perhaps the default flavor of when the world thinks of sprouts, mung has been the gateway legume continuously introducing new generations to sprouting. Mung bean sprouts are mild, nutty, creamy, and with a subtle hint of "lettuce-like" earthiness. For a smaller 1" sprouting tail, harvest mung sprouts as early as 48 hours from initial soaking. For larger, crunchier 3-4" restaurant-style sprouts, read our section on Vertical Sprouting.

### PEA

### Pisum sativum



### GETTING STARTED:

While there are many varieties of garden pea, be sure to only use clearly labeled "sprouting pea" if intended for seed sprouts. Garden seed is often treated to defend against outdoor conditions and should never be used for sprouting. Pea is one of the easier seeds to sprout, only requiring an initial 4-6 hour soaking and 2-3 days of daily rinsing. A medium legume with a thick tail, pea may be sprouted in either a tray, jar, or bag.

### SPROUTING:

Like many legumes, sprouting pea is thin-shelled, clean, odorless, and only requires 2-3 days of rinsing. Regardless of variety, pea has a thin and translucent shell that is soft and edible within the first 2 days of sprouting, becoming fairly tough and fibrous by day 3. Regular rinsing helps separate the sprout from the shell. Sprouting pea produces a longer 2" sprout tail when ready for harvest, compared to garbanzo which produces no tail. Unlike pea shoots microgreens, keep pea sprouts in darkness to inhibit bittering chlorophyll production.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 8 TBSP [1/2 CUP]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: -125 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, IRON, VITAMINS C, B-COMPLEX

### READY TO EAT:

Whether growing soil-based pea shoots or hydroponic sprouts, pea is arguably the sweetest sprout ever, often grown exclusively for sugar content. Since sprouting pea is germinated entirely in the dark without need for sunlight, it can be eaten as early as 48 hours from soaking. Pea sprouts are best eaten before the sprout tail develops maturing discoloration. The translucent shell is completely edible but becomes less palatable as early as day 3.



Glycine max L. Merr.

### GETTING STARTED:

As simple to germinate as mung or garbanzo, soybean is a deceptively easy sprouting seed catapulted to international stardom over the last few decades. Like any large or hardshell legume, soy benefits from a longer 8-12 hour presoak to expedite germination and is able to sprout quickly using either the tray, jar, or bag method. Soy is nearly odorless when compared to salad sprouts and best covered from light during 2-5 day growth.

### **DIFFICULTY: MEDIUM**

RECOMMENDED SEEDING: 4 TBSP (1/4 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-5

CALORIES: -85 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, POTASSIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, ZINC, IRON, VITAMIN C, B-COMPLEX

### SPROUTING:

Since soybean is such a versatile seed, it is widely sprouted very differently depending on the intended use. If sprouting for any type of DIY soymilk, tofu, or cooking, soy can be soaked overnight for 12 hours or more and ready to use after one good rinse. If germinating as a classic sprout, soybean is best treated like any other hardshell legume and rinsed 2-3x daily. Soy excretes a negligible amount of organic waste and is very clean to maintain. Keep covered until harvest as soy tastes best free of chlorophyll.

### READY TO EAT:

Soybean is sprouted for many different uses and ready to eat anywhere from 2-5 days. If soaking for DIY use, soybean is ready to use as early as 24 hours. If used as a traditional sprouting seed, soy is best harvested at about 2-3 days or when sprouting tail is no more than ½" long just like fava and garbanzo. Soybean is one of the few sprouts that tastes best in tandem with other sprouts and preparations, as soybean readily adopts other flavors.

# GRAIN and GRASS SPROUTS

### GRAIN AND GRASS SPROUTS



It's no secret that grass and grain seeds perform best as a soil-based microgreen for fresh countertop wheatgrass juice. Grasses and grains grown as a 7-10 day microgreen quickly become far too fibrous for humans to digest, only allowing the nutrients to be available if juiced or pressed. Remember that cows have four stomachs just to digest all the fiber in grass.

Unlike microgreens, hydroponic seed sprouting allows for these same grains and grasses to be eaten raw in just 24-48 hours while the seed is still soft and digestible. True grasses such as wheat, barley, rye, triticale, farro, or kamut all share the same seed size, flavor, and appearance, making it difficult to differentiate one from another almost immediately after seeding.

Cereal grains and seeds such as millet, oat, amaranth, quinoa, and even sunflower share more unique features, yet can still be sprouted in less than 24 hours for raw eating or baking. If intending to mill grass and cereal grain into flour, be sure to soak overnight before dehydrating the seeds in the freezer. Sprout cereal grains overnight as a soft treat for your birdfeeder.



Amaranthus viridis

### GETTING STARTED:

Perhaps the smallest sprouting seed seconded only to watercress, amaranth is a pseudocereal yet boasts all the same tolerances and reliable germination as the ancient field grains. Despite a much smaller size, amaranth is sprouted just as any other seed and only requires a minimal 4-6 hour presoak. Amaranth sprouts benefit from some light exposure to help guarantee the richest, most vibrant color and flavor.

### **DIFFICULTY: MEDIUM**

**RECOMMENDED SEEDING: 1 TBSP** 

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 7-10

CALORIES: ~125 CALORIES PER CUP

PRIME NUTRIENTS: FIBER, PROTEIN, CALCIUM, MANGANESE, MAGNESIUM, PHOS-PHORUS, IRON, VITAMINS A, C, E

### SPROUTING:

Amaranth sprouts are often compared to clover in terms of habit and appearance, although amaranth can take up to 4-5 days to germinate. Amaranth is best rinsed 2-3 times daily just like any other sprout but be careful when doing so because the seeds can be tricky due to size and near weightlessness. If sprouting in a shallow medium such as a tray, be sure to lightly rinse so as not to splash out any seeds. Unlike larger grains, amaranth does not sprout well in a bag and best when germinated in trays and jars.

### READY TO EAT:

Whether germinated as a sprout or microgreen, amaranth seeds produce some of the most wildly colorful sprouts available to the home cook. Amaranth sprouts are thin, slender, and hygienic similar to clover and alfalfa while boasting a subtle flavor profile somewhere between agreeable clover and spicy radish. For optimal color, flavor, and germination, allow sprouted amaranth exposure to regular lighting throughout the full 7-10 days until harvest.



One of the top five grains produced throughout all of civilization, barley has earned its stripes as a hardy field grain for its reliability, tolerance, and ease of germination. Ancient grains and grasses such as barley have endured millennia because their seeds are not picky and always ready to sprout. Barley seed is not nearly as soft as oat or kamut but still only requires an average 6-8 hour presoak before storing in a dark spot for 2-3 days.

### SPROUTING:

Grains such as barley, oat, rye, and wheat are traditionally sprouted to the point of just merely plumping or swelling and can always be done so in either a sprouting tray, jar, or bag. Remember, ancient grains aren't choosy. After the 6-8 hour presoak, continue to rinse barley seeds 2-3 times a day as they begin to germinate. Barley doesn't necessarily need to be sprouted in the dark but it does help to retain sweeter notes while delaying the eventual chlorophyll production. Barley sprouts are entirely clean, odorless, and stainless to handle.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 5-6 TBSP [1/3 CUP]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: ~160 CALORIES PER 1/4 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, POTAS-SIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, VITAMINS B-COMPLEX, E, K

### READY TO EAT:

If soaking barley seeds for soups, stews, beverages, or flour, they can be ready to use in less than a day as many grains are only sprouted to quickly plump and swell for baking. Unlike salad and legume sprouts, grains such as barley, oat, rye, and wheat should not be sprouted to produce long, wiry tails and roots which directly compromise flavor when grown too mature. Sprouted barley is best if harvested 2-3 days from soaking for optimal flavor.



Einkorn (Triticum monococcum)
Emmer (Triticum dicoccon)
Spelt (Triticum spelta)

### GETTING STARTED:

Farro is the generic name for three closely related ancient wheat grains einkorn, emmer, and spelt which are popularly interchangeable in the kitchen. Although emmer is technically known as "true" farro, each of the species share nearly identical use, flavor, and days to harvest. Like common wheat, farro is one of the absolute easiest seeds to sprout, only requiring a 6-8 hour presoak to begin germination.

### DIFFICULTY: EASY

RECOMMENDED SEEDING: 5-6 TBSP (1/3 CUP)

SPROUTING METHOD: TRAY JAR OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 1-2

CALORIES: -160 CALORIES PER 1/4 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, POTAS-SIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, VITAMINS B-COMPLEX, E, K

### SPROUTING:

Whether sprouting einkorn, emmer, or spelt, farro seed is effortless to germinate for either raw or baking use. Wheat seeds are popularly soaked overnight, dehydrated, then ground into flour for optimal baking. For raw use, sprouts require 2-3 rinses per day in the brief 24-48 hours which it takes to sprout. Farro may be soaked and sprouted in nearly any medium and is clean, odorless, with a soft edible shell. Because farro is best harvested in 1-2 days it doesn't need to be stored in the dark away from sunlight.

### READY TO EAT:

Einkorn, emmer, and spelt share a similar and very common "wheatgrass" flavor by as early as 48 hours even without any green chlorophyll content. Farro quickly develops root hairs and a sprouting tail which aggressively develops into a mature blade of grass by day 3-4, causing the sprout to lose any culinary value. Grain and wheat seed such as farro is traditionally soaked overnight and then dried and milled into an organic sprouted baking flour.



Known as Khorasan or Oriental wheat from which it's native, kamut is one of the several ancient grains which has found new life as an effortless microgreen and sprouting seed. Similar to barley, oat, and wheat, kamut has thrived for millennia as a field crop and is readily germinated with a regular 6-8 hour soak. Kamut seeds are rarely sold with a husk and, if sprouting, be sure to only ever buy seeds labeled "for sprouting."

### SPROUTING:

When sown as a field grain allowed to reach maturity, Khorasan germinates faster and grows taller than common wheat or other members of Triticum. This same tenacity can be expected when sprouting for a quick 2-3 day harvest. After the 6-8 hour presoak, be sure to place kamut seeds in the dark for their entire 2-3 day life to minimize chlorophyll production. Kamut seeds quickly begin to sprout long, fibrous root hairs and a tail within 72 hours.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 5-6 TBSP [1/3 CUP]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: ~160 CALORIES PER 1/4 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, POTAS-SIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, VITAMINS B-COMPLEX, E, K

### READY TO EAT:

Like any grain, kamut can be quickly soaked for 6 hours or less for same-day cooking and baking or allowed to continue to develop for another 2-3 days. Sprouted kamut is best enjoyed within 2-3 days of seeding based on preference of flavor, texture, and size. Even if grown entirely in the dark, kamut sprouts still develop a very distinct hint of chlorophyll as early as day 3 or 4, producing the fibrous root hairs not typically preferred in grain.

## HULLED MILLET



Panicum miliaceum

### GETTING STARTED:

Enjoyed whole perhaps more than any other cereal grain, millet is truly one of the first and most diverse sprouting seeds ever. Although an ancient grain like barley, rye, and wheat, millet seed is much smaller in size and germinates a day or two slower than others. Many culinary uses of millet such as in hot stews and baking only require a 6-8 hour presoak for same-day use. If planning to use raw, allow millet to continue sprouting for 4-6 days.

### SPROUTING:

Don't let the smaller seed size and days to germination fool you, millet is as every bit tolerant and guaranteed to sprout as other grains. Millet seeds are clean, odorless, and don't excrete any messy byproduct other than a thin husk similar to popcorn kernels, which becomes more easily digestible the longer the seeds are able to soak. Germination should evenly begin by about day 3 with regular 2-3 daily rinsings and will noticeably produce thin roots and a moderate shoot. Millet does not necessarily need to stay in the dark like other grains.

DIFFICULTY: FASY

RECOMMENDED SEEDING: 4 TBSP (1/4 CUP)

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 4-6

CALORIES: ~135 CALORIES PER CUP

PRIME NUTRIENTS: FIBER, PROTEIN, AMINO ACIDS, IRON, CALCIUM, PHOSPHORUS, MAGNESIUM, VITAMINS B-COMPLEX, C, E, K

### READY TO EAT:

For most culinary uses, such as in hot preparations, millet is ready to eat same-day as the 6-8 presoak because the cooking process will continue to soften the fibrous seed, making it more digestible. Millet doesn't produce the same early hint of chlorophyll as found in barley, rye, or wheat and is arguably the sweetest, most delicious of the whole grains. Raw millet sprouts are best enjoyed at about 4-6 days when roots have just begun to emerge.

## HULLED OAT

Avena sativa



### GETTING STARTED:

Oat is one of the most beloved and delicious sprouting grains and, as an ancient field crop, is nearly effortless to germinate both in and out of soil. Only ever use hulled oats, groats, or clearly labeled "oats for sprouting" because the thick fibrous hull on whole oat is far too indigestible. Oat grain is very soft and will begin to germinate within the 4-6 hour presoak. Keep sprouting oats in the dark for the full 3-5 days for sweetest flavor.

### SPROUTING:

If soaking hulled oats for baking or cooking, allow to soak for 6-24 hours to soften and make more malleable. For traditional seed sprouting, allow oats to sprout for no more than 3-5 days before harvest. Oat is one of the softest, simplest, and most hygienic sprouting grains, requiring no real effort other than 2-3 daily rinses and being sure to keep them covered from light. Like any cereal grain, oat is odorless and stainless but quickly develops bitter chlorophyll when exposed to sunlight, causing oat to lose some of its signature sweetness.

**DIFFICULTY:** EASY

RECOMMENDED SEEDING: 5-6 TBSP (1/3 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 3-5

CALORIES: ~160 CALORIES PER 1/4 CLIP

PRIME NUTRIENTS: FIBER, PROTEIN, POTASSIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, VITAMINS B-COMPLEX, E. K

### READY TO EAT:

There is no wrong time to eat sprouted oats other than too late. Home cooks are more than familiar with quick sprouting oats for same-day use or the breakfast favorite "overnight oats". For conventional sprouts, harvest no later than 3-5 days to not allow for too many root hairs or a sprout tail to develop. While these long and fibrous root hairs are desired in other sprouting varieties, they begin to mark the decline in quality of flavor in oat.



Chenopodium quinoa

### GETTING STARTED:

Quinoa is one of the many grains popularly harvested in under 24 hours, merely soaking the seeds so they're plump and malleable for raw use. Though it may be grown into much longer 2-3" shoots, sprouted quinoa will not perform as well as soil-based microgreens. Quinoa is simple to sprout and can be done so in either a tray, jar, or bag. Harvests so quick that there is no need to place in the dark.

### **DIFFICULTY:** EASY

RECOMMENDED SEEDING: 5-6 TBSP (1/3 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 8-24 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 1-2

CALORIES: ~210 CALORIES PER 1/3 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, AMINO ACIDS, IRON, CALCIUM, PHOSPHORUS, MAGNESIUM, VITAMINS B-COMPLEX, E, K

### SPROUTING:

Sprouted quinoa noticeably excretes more metabolic waste and carbon dioxide than other seeds and should be rinsed thoroughly 2-3 times per day, especially if intending to eat raw. Quinoa sprouts will appear to be bubbling or carbonated when rinsing due to the high amount of natural carbon dioxide excreted during germination. Other than daily rinsings, quinoa is nearly effortless to sprout and is free from staining and discoloration. If intending to mill into flour, allow sprouted quinoa at least 48 hours to dry after an 8-24 hour presoak.

### READY TO EAT:

Quinoa sprouts are not traditionally harvested with long sprouting tails and are best enjoyed when plump, fibrous, and raw after 24-48 hours. If baking or cooking, quinoa sprouts are ready to use after an overnight presoak. If enjoying raw, harvest quinoa sprouts at around 48 hours from seeding, possibly longer, to allow for a slight sprouting tail to develop, helping to further soften the tough exterior shell for granola, yogurts, and smoothies.

# **PVE**Secale cereale



### GETTING STARTED:

Rye seed is as quick, reliable, and effortless to germinate as any other grain, yet delivers sweeter and more versatile flavors than any wheat seed. Whether sprouting in a kitchen or sowing in a field, rye hardly requires any attention once germinated. Presoak rye seeds 6-8 hours for same-day germination for both raw and culinary use. Rye seeds are so quick to germinate that they don't need dark storage like most sprouts.

### SPROUTING:

Rye begins to germinate within the 6-8 hour presoak and is a clean, odorless, and painless sprouting seed. Sprouted rye seeds don't need to be placed in any darkness during germination because they are best if harvested within 48 hours and easily sprouted in either a tray, jar, or bag. Closely watch rye sprouts after the first 24 hours because seeds will rapidly develop fibrous roots and a tail, compromising classic rye flavor. Rye seeds may also be soaked overnight to reduce cooking time or to be used as fresh rye berries in breads and salads.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 5-6 TBSP [1/3 CUP]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 1-2

CALORIES: -160 CALORIES PER 1/4 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, POTAS-SIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, VITAMINS B-COMPLEX, E, K

### READY TO EAT:

Rye sprouts are arguably the most delicious of the grains because they are not overwhelmed by heavy notes of wheatgrass. Rye sprouts are best enjoyed young and tender within 48 hours of seeding to avoid the rapid development of roots, chlorophyll, and blades of grass by as early as day 4. Most types of sprouted wheat quickly adopt the familiar hints of chlorophyll even without greening, while rye boasts a more pleasant and mild flavor for longer.



Helianthus annuus

### GETTING STARTED:

Sunflower seeds are far more common as a 7-10 day microgreen but are slowly becoming just as popular as an effort-less 72-hour sprouting seed. Whether sprouting, microgreening, or growing out in the garden bed, sunflowers are one of the most determined crops in the world and easily germinate with only an 8-12 hour presoak. Sunflower sprouts are cleaner than microgreens because sprouts are able to grow free of soils or messy mediums.

### SPROUTING:

Sunflower seeds are slightly larger and more fibrous than others and can be easily sprouted using either a tray, jar, or bag. While many seeds benefit from a period of darkness during germination, sunflower seeds sprout so readily that they may be kept on the countertop in full light. Sunflower seeds only require 2-3 daily rinses because they are clean, odorless, and stain-free, but still must be shelled like flavored sunflower seeds. Sunflower sprouts are still creamy white by day 3 with only a ½ inch-long sprouting tail when ready to harvest.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 4 TBSP [1/4 CUP]

SPROUTING METHOD: TRAY, JAR OR BAG

INITIAL SOAK: 8-12 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: -40 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, CALCIUM, IRON, POTASSIUM, PHOSPHORUS, MAGNESIUM, VITAMIN A, C, B-COMPLEX

### READY TO EAT:

Unlike sunflower microgreens, sunflower sprouts taste best if harvested within 48-72 hours of seeding, before chlorophyll or true leaves emerge. Sprouted sunflower seeds are easy to peel and may be enjoyed just like traditional store-bought seeds. Sunflower is a hardshell seed whose fibrous exterior doesn't soften and become edible like other seeds, even after overnight soaking. Try topping with your favorite seasonings just like at the ballpark.

### RITICALE

x Triticosecale



### GETTING STARTED:

Triticale is a European wheat hybrid crossed with the always tenacious common wheat (Triticum) and rye grain (Secale). While both wheat and rye are among the easiest sprouting seeds, each germinating within 24 hours, triticale has also proven to be just as successful. If sprouting for baking, triticale may be soaked overnight for reduced cook times. For an easy 1-2 day harvest, presoak 6-8 hours without any need to store in the dark.

### **DIFFICULTY: EASY**

RECOMMENDED SEEDING: 5-6 TBSP [1/3 CUP]

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 1-2

CALORIES: ~160 CALORIES PER 1/4 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, POTAS-SIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, VITAMINS B-COMPLEX, E, K

### SPROUTING:

Whether sown in the garden or sprouted on the kitchen counter, triticale germinates within 24 hours and aggressively matures inside of 5 days. Triticale only requires a 6-8 hour presoak and without a period of darkness because sprouts are best harvested and enjoyed before chlorophyll has developed. Rinse 2-3 times daily to prevent from hardening and becoming inedible. The only difficulty with sprouting triticale may be the speed at which it germinates, only allowing for a fleeting 24-48 hour harvest window.

### READY TO EAT:

Triticale is best harvested within 48 hours of seeding because it quickly develops roots and a sprout tail (blade of grass) too fibrous for culinary use as early as 72 hours. Although triticale doesn't produce chlorophyll within the first 48 hours, it still has that familiar "wheatgrass" flavor as its wheat parent crop rather than any subtlety of rye. Triticale can always be soaked overnight for next-day cooking to best help reduce cooking times.



There is no seed on earth that germinates, sprouts, and grows quicker or more reliably than wheat and, the more you garden and sprout the more you'll understand. When sprouting wheat, be sure to only ever purchase organic seed or clearly labeled "seed for sprouting" because seed intended for commercial agriculture will often be chemically treated to help guarantee harvests. Seeds only need a 6-8 hour presoak to begin germination.

### **DIFFICULTY: EASY**

RECOMMENDED SEEDING: 5-6 tbsp [1/3 cup]

SPROUTING METHOD: TRAY, JAR OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 1-2

CALORIES: -160 CALORIES PER 1/4 CUP

PRIME NUTRIENTS: FIBER, PROTEIN, POTAS-SIUM, IRON, CALCIUM, PHOSPHORUS, ZINC, AMINO ACIDS, VITAMINS A, B-COMPLEX, E

### SPROUTING:

Ancient wheat seed is the gateway seed for many novice sprouters, microgreeners, and gardeners because it is without doubt the easiest possible seed to germinate while boasting many nutritional benefits. Wheat seed begins to sprout just by looking at it but, in case your powers aren't that honed, wheat grain only requires 6-8 hours presoak to begin steady and even germination within 24 hours. Sprouted wheat doesn't need to be stored in the dark like others, provided it is eaten within 48 hours.

### READY TO EAT:

Growing wheat for simple 1-2 day harvests is entirely different than growing it for a 7-10 day flat of wheatgrass intended for juicing. Sprouted wheat is best enjoyed no later than 24-48 hours from seeding because, unlike wheatgrass, wheat sprouts are sweetest and most tender before any significant root development or blades. Wheat sprouts are not intended to grow long enough to develop chlorophyll coloring and are generally too fibrous by day 4.

# SPROUT MIXES

### SPROUT MIXES



Sprout mixes are the easiest and most efficient way for beginners to sample a variety of new seeds or for sprouting veterans to test the artful culmination of their knowledge. While both exciting and different, sprouting mixes are actually one of the greatest learning tools to better understand individual soaking times, seeding rates, habits, flavors, and harvest dates of seeds when compared to one another. Mixes are hand-picked and themed by seed type, size, or flavor to offer the most unique culinary experience or health benefits.

Signature blends such the 3 Part Salad Mix, 5 Part Salad Mix, or Kick Mix each feature sprouting seeds that produce thin, crunchy, and piquant sprouts ideal for sandwiches and salads. These particular mixes will teach you the alleviating power of both clover and alfalfa and their ability to tame even the zestiest radish or mustard seed. On its own, broccoli can be a formidable and pungent sprout but, when grown as part of a medley, broccoli shines in savory subtlety.

Protein Powerhouse, Crunchy Lentil Fest, and Bean Salad Mix are legume-based and feature some of the quickest, cleanest, and most protein-dense sprout seeds available. Unlike thinner salad and sandwich sprouts which can take up to 6-7 days for harvest, larger legumes such as Protein Powerhouse, Bean Salad Mix, and Sweet Protein Mix can be ready to eat as early as 24-48 hours depending on use.

### GETTING STARTED:

3 Part Salad Mix includes three of the most popular sandwich and salad sprouts and all share the same 5-7 day harvest. Alfalfa, broccoli, and radish are all relatively soft-shelled seeds and don't need more than a standard 4-6 hour presoak. Despite being notorious for its pungent sulforaphane, broccoli is actually much cleaner and hardly noticeable when sprouted in a mix. Keep sprouts covered for 4-5 days until the last 12-24 hours before harvest.

### SPROUTING:

3 Part Salad Mix is simple, low maintenance, and readily sprouts with just 2-3 daily rinses. Although broccoli's robust odor may not be as apparent when sprouted in a mix, be sure to rinse thoroughly with cold water to rid sprouts of metabolic wastes, carbon dioxide, and organic decay from germination. Alfalfa, broccoli, and radish all thrive and taste best when grown in the dark for about 4-5 days and then receive full light on about day 5-6. Experiment with 3 Part Salad Mix to see how much chlorophyll content you prefer in your salad sprouts.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 2 tbsp [1/8 cup]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 5-7

CALORIES: -35 CALORIES PER CUP

PRIME NUTRIENTS: SULFORAPHANE, CHLOROPHYLL, CALCIUM, POTASSIUM, PHOS-PHORUS, MAGNESIUM, ZINC, IRON, VITAMINS A, B-COMPLEX, C, OMEGA-3 FATTY ACIDS

### READY TO EAT:

A truly perfect blend of flavor, the sweet and mild alfalfa shines in this mix as it tames the always potent broccoli and radish sprouts. Hints of spicy radish and savory broccoli highlight this largely alfalfa-based blend as an ideal sandwich sprout. Harvesting by day 6-7 will develop a more pronounced radish flavor, whereas harvesting at 4-5 days will leave the radish not nearly as spicy and matured. Amount of light exposure will affect flavor.

# 5 Part SALAD MIX Alfalfa Mung Broccoli Radish Lentil

### GETTING STARTED:

Easily our most popular sprouting mix, the 5 Part Salad Mix features a light, but hearty, medley of the most beloved sprouting seeds ever. None of these seeds have a particularly hard shell and should easily germinate with a 4-6 hour presoak. 5 Part Salad Mix consists of some smaller, thinner sprouts that thrive best in either a tray or jar. Although it includes the sometimes messy broccoli, 5 Part Salad Mix is clean, odorless, and well balanced.

### SPROUTING:

5 Part Salad Mix is simple, low maintenance, and easily sprouts with just 2-3 daily rinses. Although broccoli's pungent odor may not be as apparent when sprouted in a mix, be sure to rinse thoroughly with cold water to rid sprouts of metabolic wastes, carbon dioxide, and organic decay from germination. Alfalfa, broccoli, and radish all thrive and taste best when grown in the dark for about 4-5 days and then receive full light on about day 5-6. Experiment with 5 Part Salad Mix to see how much chlorophyll content you prefer in your salad sprouts.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 2 TBSP (1/8 CUP)

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 5-7

CALORIES: -45 CALORIES PER CUP

PRIME NUTRIENTS: SULFORAPHANE, CHLO-ROPHYLL, PROTEIN, CALCIUM, POTASSIUM, PHOSPHORUS, MAGNESIUM, ZINC, IRON, VITAMINS A, B-COMPLEX, C, OMEGA-3

### READY TO EAT:

Each one of these seeds are readily enjoyed within 5-7 days of soaking depending on preference of length, spice, and chlorophyll. Traces of radish and broccoli highlight this largely alfalfa-based blend with a mild hint of both lentil and mung. Harvesting by day 6-7 will develop a more pronounced radish flavor, whereas harvesting at 4-5 days will leave the radish not nearly as spicy and matured. The amount of sunlight exposure will affect flavor.

## Bean SALAD MIX

Adzuki Mung Lentil Radish

### GETTING STARTED:

Bean Salad Mix features a simple and perfectly balanced blend of mild, nutty legumes with the light zesty kick of radish. Allow Bean Salad Mix to presoak for 6-8 hours to give adzuki extra time to soften and keep even germination with the softer seeds. Cover from light during 3-4 day growth. Although radish is a 5-6 day sprout reliant on sunlight for chlorophyll, it boasts a far milder note when kept in dark and enjoyed by day 3-4.

### SPROUTING:

All four sprouting seeds in the Bean Salad Mix are easy, hygienic, and free from unnecessary mess or odors. After the 6-8 hour presoak, thoroughly rinse before storing in the dark for the next 3-4 days. Along with metabolic wastes and organic decay from germination, adzuki and mung will naturally leach away their color and should be rinsed thoroughly during the 2-3 daily rinses. The four seed varieties in the Bean Salad Mix have different appearances, habits, and germination dates, but all share a harvest window of 3-4 days.

DIFFICULTY: FASY

RECOMMENDED SEEDING: 4 TBSP [1/4 CUP]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 3-4

CALORIES: -125 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, CALCIUM, MAGNESIUM, PHOSPHORUS, POTASSIUM, MANGANESE, IRON, ZINC, VITAMIN C. B-COMPLEX

### READY TO EAT:

The genius of Bean Salad Mix is that the radish sprouts don't get to fully mature to their 5-6 day potential, keeping them mild, tempered, and even sweet when paired with pleasant lentil, mung, and adzuki. Bean Salad Mix may even be enjoyed as early as 2 days for a quick legume sprout or as late as 5 days for more developed radish spice. Sprout mixes require a little trial and error to learn how to sync different seeds into one opportune harvest.

### GETTING STARTED:

If lentil is the beginner's sprout, then Crunchy Lentil Fest surely must be the beginner's sprout mix. This blend features blue, green, and French lentil, all soft-shelled and requiring only a 4-6 hour soak. Clean, odorless, and free from any mucilage, Crunchy Lentil Fest rinses without any mess or stain. Lentils produce thin, delicate tails and best if sprouted in a tray or jar rather than a bag intended for larger, more durable sprouting tails.

### SPROUTING:

Lentil is quick to sprout and will even germinate within the 4-6 hour presoak. Rinse sprouts 2-3 times a day to manage growth while ridding of organic decomposition and metabolic wastes naturally left behind in sprouting. Lentil is known to dehydrate somewhat readily and, depending on climate, benefits from an extra daily rinse in drier climates. Thin sprout tails develop within 48 hours and begin to produce slight leafy green and yellow tips within 72 hours. Keep Crunchy Lentil Fest covered in dark for the full 2-3 days until ready to harvest.

**DIFFICULTY: EASY** 

RECOMMENDED SEEDING: 2 TBSP (1/8 CUP)

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-3

CALORIES: -105 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTASSIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, ZINC, MANGANESE, VITAMIN C AND B-COMPLEX

### READY TO EAT:

If sprouting for raw use, lentils are most tender and at the peak of freshness within 48-72 hours or when sprouts have developed thin .5" tails with only slight discoloration. Crunchy Lentil Fest has joined together an assortment of three varieties of lentil each with their own flavor, habit, and culinary uses. Despite some textural and cooking differences, all three French, green, and red lentils share the same mellow flavor and days to harvest



NCK MIX

Clover Mustard Radish

### GETTING STARTED:

Kick Mix features two of the easiest sprouting seeds, clover and radish, along with the semi-mucilaginous mustard which actually germinates better when sown in a mix. All three are quick to sprout and will even begin germination during the 4-6 hour presoak. Sprouting trays and Mason jars are ideally suited for the smaller, more delicate salad sprouts in Kick Mix. Be sure to thoroughly rinse and drain since mustard is a semi-mucilaginous crucifer.

### SPROUTING:

After soaking, keep sprouting seeds covered from light during the next 4-5 days while continuing to rinse 2-3x daily. While clover and radish are clean and odor-free, mustard is still closely related to broccoli and contains the pungent sulfur-like compound, sulforaphane. Be sure to give sprouts a vigorous rinsing to rid them of carbon dioxide, metabolic waste, and organic mucus from germination. After covering for 4-5 days, allow full lighting during the last 12-24 hours, or when sprouts are an average of 2" long.

DIFFICULTY: EASY

RECOMMENDED SEEDING: 2 TBSP [1/8 CUP]

SPROUTING METHOD: TRAY OR JAR

INITIAL SOAK: 4-6 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 5-6

CALORIES: -35 CALORIES PER CUP

PRIME NUTRIENTS: CHLOROPHYLL, CALCI-UM, POTASSIUM, PHOSPHORUS, MAGNESIUM, ZINC, IRON, VITAMINS A, B-COMPLEX, C, OMEGA-3 FATTY ACIDS

### READY TO EAT:

Kick Mix is ready to enjoy in about 5-6 days, depending on how much green chlorophyll development you prefer. Clover is popularly kept in the dark for entire 5-6 day growth, while radish and mustard always taste best with at least 12-24 hours of light before serving. Experiment to find your preference. Kick Mix boasts two of the spiciest and zestiest sprouts available, perfectly balanced with a sweet and mild clover. Rinse and dry before serving.

# Protein POWERHOUSE

Adzuki Mung Garbanzo Pea



### GETTING STARTED:

Protein Powerhouse delivers four of the cleanest, tastiest, and most protein-dense legumes into a quick 2-4 day mix. Sprouting each of these seeds individually will teach you that adzuki has a slightly tougher shell than garbanzo, mung, or pea and benefits from a longer 8 hour soak to maintain even germination. Protein Powerhouse consists of larger seeds that thrive in either a sprouting tray, jar, or bag and do not need to be covered from light.

### SPROUTING:

Due to its larger seed size, Protein Powerhouse is truly one of the easiest and most hygienic sprouting mixes. Although adzuki and mung will naturally shed some of their colorful exterior into the water, Protein Powerhouse is still very clean and only requires the average 2-3 daily rinses. Larger legumes do not need to be kept in dark like most sprouts. Sample the adzuki throughout to test for readiness, since adzuki will be the last to sprout and possibly dangerous to chew if not properly germinated.

**DIFFICULTY:** EASY

RECOMMENDED SEEDING: 5-6 TBSP (1/3 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 2-4

CALORIES: ~250 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, IRON, ZINC, VITAMINS B-COMPLEX, C

### READY TO EAT:

Protein Powerhouse is ready to enjoy as early as 48 hours, but reaches its peak of flavor around day 3-4 with more time to mature. Mung, garbanzo, and pea develop roughly 1" long sprouting tails by 3-4 days while adzuki bean has a much slighter tail when ready to eat. Protein Powerhouse is best eaten no later than 5 days since both adzuki and garbanzo are known to quickly turn to starch and become nearly inedible as they sprout vegetative growth.

# Sweet PROTEIN MIX

Fava Mung Yellow Pea

### GETTING STARTED:

Sweet Protein Mix has been handpicked to feature three of the simplest and most readily sprouted legumes including fava, mung, and yellow pea. Because each of these are fairly large seeds, Sweet Protein Mix can be easily sprouted in either a tray, jar, or hemp bag ready for harvesting in about 3-4 days. Presoak Sweet Protein Mix for 6-8 hours without storing in the dark since large legumes taste best free from chlorophyll.

### SPROUTING:

Whether sprouting fava, mung, and yellow pea individually or as part of a mix, each of these legumes are effortless to sprout and ready for harvest in only about 4 days. Rinse seeds 2-3 times daily after the initial 6-8 hour presoak without any worry of storing in the dark. As you continue to rinse, watch for mung bean germination. If mung doesn't seem to have sprouted after 72 hours, soak the entire Sweet Protein Mix for another 2-6 hours to ensure timely germination with fava and yellow pea. Sweet Protein Mix is clean, odorless, and painless.

DIFFICULTY: FASY

RECOMMENDED SEEDING: 8 TBSP (1/2 CUP)

SPROUTING METHOD: TRAY, JAR, OR BAG

INITIAL SOAK: 6-8 HOURS

RINSE FREQUENCY: 2-3 TIMES PER DAY

DAYS TO HARVEST: 3-4

CALORIES: ~250 CALORIES PER CUP

PRIME NUTRIENTS: PROTEIN, FIBER, POTAS-SIUM, PHOSPHORUS, MAGNESIUM, CALCIUM, IRON, ZINC, VITAMINS B-COMPLEX, C

### READY TO EAT:

Fava and yellow pea have fewer days to harvest and will appear more developed than mung which usually requires an extra day or so to develop its iconic sprouting tail. Sweet Protein Mix is best harvested and enjoyed by no later than 3-4 days to accommodate for flavor and texture of all three seeds. Both yellow pea and fava bean will shed a translucent, soft, and edible exterior shell that becomes far too fibrous and inedible by as early as day 5.

# VITAMINS and NUTRENTS SPROUTS

### VITAMIN A.

Provitamin A is one of the best antioxidants and immune system builders available in the garden. Unlike synthesized Vitamin A, which can be toxic in large doses, provitamin A is actually a dormant form of the vitamin stored in the liver and fatty tissue for later use. Vitamin A is essential for healthy epithelial tissue, the thin protective layer lining our blood vessels, organs, digestive tracts, and all internal cavities. The largest example of epithelial tissue is our skin (epidermis) which lines and protects the outer portion of our body. Provitamin A helps protect skin from effects of solar radiation, especially in areas with depleted ozone. Availability of pro-vitamin A in sprouts increases drastically when sprouts are given a few hours of direct sunlight to develop green chlorophyll.

### VITAMIN B COMPLEX.

The B-complex is an essential group of water-soluble vitamins responsible for a long list of benefits including boosted energy, eyesight, brain function, digestion, healthy cell metabolism, and red blood cell production. Although similar in name, they are chemically different and can often be found in many of the same foods as one another. B-complex includes B-1 (thiamine), B-2 (riboflavin), B-3 (niacin), B-4 (adenine), B-5 (pantothenic acid), B-6 (pyridoxine), B-7 (biotin), B-8 (inositol), B-9 (folic Acid), B-12 (cobalamin), B-13 (orotic acid), and B-15 (pangamic acid). B vitamins aid in the metabolism of proteins and fats, boost energy, and help the immune system produce antibodies while regulating the liver and kidneys. One of the highest sources of B vitamins is sprouted grains.

### VITAMIN C.

One of the most popular and recognizable vitamins, vitamin C neutralizes and detoxifies over 50 known chemical toxins. For example, it keeps cancer-causing chemicals known as nitrosamines from forming out of harmful nitrates. Much like carotene and vitamin A, vitamin C also boosts the immune system, increasing the production of disease-fighting lymphocytes and the antiviral interferon. It increases iron assimilation and helps prevent anemia. While foods such as store bought orange juice are excellent sources of vitamin C, many of these juices are reinforced with synthesized ascorbic acid (vitamin C) because the rapid half-life of ascorbic acid would deplete before customers actually purchase the food. Raw sprouts ensure the highest quality and quantity of naturally occurring vitamin C.

### VITAMIN E.

Essential for increased blood flow and circulatory health, vitamin E is widely associated with healthier skin, eyesight, and vascularity along with a host of antioxidant properties. Vitamin E prevents and removes the rancidity of fats in the bloodstream and elsewhere in the body, especially in the skin. Vitamin E boosts the oxygen-carrying capacity of red blood cells and helps to oxygenate body tissues while protecting enzymes, hormones, and other antioxidants. It strengthens the immune system and assists production of T-cells, B-cells, and several antibodies. While store bought supplements can help regulate your daily intake of vitamin E, sprouting wheat, clover, or alfalfa is far more cost effective and can satisfy the recommended daily dosage as either a fresh garnish or low-calorie snack.

### CHLOROPHYLL.

Neither a vitamin nor a mineral, chlorophyll is a potent antioxidant and blood purifier whose molecular structure is identical to hemes found in red blood cells. Since our body converts chlorophyll to heme in producing new red blood cells, it is essential in the diet for a healthy, oxygen-rich blood supply. Chlorophyll has also been found to help fight infection by inhibiting the growth of bacteria, especially odor-causing bacteria, making it more than a great detoxifier, but a natural deodorant too. While every green sprout naturally has chlorophyll, the highest levels are found in cereal grasses such as wheat, rye, and barley after they've been juiced and strained. Wheat sprouts and wheatgrass juice provide many other important antioxidants, minerals, and enzymes for quick assimilation into the bloodstream.

### CALCIUM.

A naturally occurring element, calcium is an alkaline earth metal directly responsible for bone health, kidney health, nerve function, blood clotting, electrolyte balance, muscle contraction, and a well-regulated heart beat. While calcium has many uses throughout the human body, 99% of all calcium composition is found in bones and teeth. As an organic earth metal, calcium helps the body eliminate other naturally occurring heavy metals such as cadmium, lead, mercury, and even radioactive isotopes. Our bodies do not naturally produce calcium, requiring an outside source to help supplement our daily values. Although the most popular sources of calcium are derived from cheese, yogurt, and salmon, some of the most abundant sources come from beans, lentils, chia, soy, and sunflower seeds.

### FIBER.

Unlike many essential nutrients and minerals, dietary fiber is not available in both animal and plant products and is one of the only to be 100% plant-based. Many of us have come to rely on powders to help supplement a deficiency in fiber, simply because we don't consume nearly enough fruits, vegetables, and legumes. Whether soluble or insoluble, dietary fiber is responsible for nearly every possible step of the digestive process from balancing cholesterol and blood sugars to nutrient absorption and excretion. Along with sprouted cereal grains like chia, wheat, and oat, large legumes such as garbanzo, pea, lentil, and bean are excellent sources and can be equally cooked or sprouted without losing any fiber content. Because sprouting is 100% plant-based, you're guaranteed to get some fiber in every bite.

### IRON.

The most abundant element on Earth by mass seconded by oxygen, iron is an essential mineral found in every cell in the body and nearly every living and non-living thing on this planet. Iron is most vital in the production of red blood cell hemoglobins, which are solely responsible for properly supplying oxygen from the lungs throughout the entire body. A lack of hemoglobin production can directly lead to anemia, most noticeably marked by fatigue and skin discoloration. Dietary iron is also found to improve immune response by boosting respiratory action and tissue oxygenation while also preventing the absorption of heavy metals such as lead and cadmium into the bloodstream. Commonly associated with red meat and shellfish, iron is readily available as a plantbased mineral in legume and broccoli sprouts. Short on iron? Fenugreek sprouts are so rich in iron that they're often said to taste like pennies.

### MAGNESIUM.

Responsible for more than 300 functions in the human body including muscle contraction and nerve signaling, magnesium is a severely underappreciated mineral for being the 9th most abundant element on Earth. Relative to other alkaline metals, magnesium reduces natural calcium residue in the kidneys, keeping them free from potential toxic buildup. As one of the most abundant minerals on Earth, magnesium is found highly concentrated in such plant-based sources such as sprouted wheat, soy, black bean, and raw pumpkin seeds. The Recommended Daily Allowance (RDA) is so small for magnesium that only a handful of wheat or soybean sprouts will suffice for a serving. Remember that dietary magnesium supplements are sold anywhere from \$25-45, roughly about 200-600% more than a single pound of organic soybean.

### MANGANESE.

An essential trace element similar to zinc, copper, and selenium, manganese is not produced in the human body and must always be acquired through food. While many essential minerals seem to have only one or two primary roles in the body, manganese is responsible for several functions including the metabolism of glucose, cholesterol, carbohydrates, and amino acids as well as being a vital mineral in immune response, bone formation, and child reproduction. Sprouted legumes, wheat, and soy are good sources of manganese as well as heavily starchy foods such as sweet potatoes and potato. Manganese is such a trace element that there is no established Recommended Daily Allowance (RDA) and only a serving of your favorite legume should do the trick. Even for plants, manganese sulphate is one of the most potent fertilizers available to gardeners.

### OMEGA-3 FATTY ACIDS.

Synonymous with heart health and lower cholesterol, omega-3 fats are complex and polyunsaturated, far more vital and healthier than store bought saturated fats in the form of junk food and fried meats. Omega-3 is found abundantly in fatty fish such as mackerel, salmon, and seabass, yet such plantbased sources like sprouted chia, flax, soy, and hemp offer the same levels of essential daily EPA and DHA omega-3. While studies linking omega-3 to reduced heart disease are disputed and ultimately inconclusive, the natural supplementation of plant-based omega-3 fatty acids has shown a correlation between lowering triglycerides, raising good cholesterol (HDL), reducing the buildup of arterial clots and plaque, as well as helping alleviate inflammation caused by rheumatoid arthritis. Including flax, chia, soy, and seafood, omega-3 fatty acids are widely found in some of the healthiest organic foods nature has to offer.

### PHOSPHORUS.

Similar to calcium in both composition and function while performing nearly as many roles, dietary phosphorus is an important mineral necessary to daily life, yet not produced by the human body. While every cell in our body contains phosphorus, nearly 90% of our body's phosphorus supply is stored in our bones and teeth, providing substantial bone health in conjunction with calcium. Phosphorus is often found in high protein foods like meat and dairy, but is also a staple in plant-based sources of protein such as legumes, beans, and nuts. Macrominerals including calcium, magnesium, potassium, and phosphorus work together in the human body and require a steady balance for each to be most effective.

### PROTEIN.

Found in nearly every cell, tissue, and follicle in the human body, protein is perhaps the most familiar of dietary nutrients and minerals and one of the most widely available nutrients in the plant kingdom. There are tens of thousands of different proteins in the body at any given time, each with a long list of immediate benefits including maintaining muscle mass, boosting metabolism, cell function, and powering hemoglobins. Although protein molecules themselves are important, it is the amino acids that comprise the protein that are most essential. The human body naturally produces 10 of the 20 amino acids, meaning that the other 10 essential amino acids must be acquired through food. While expensive whey protein powders have dominated the market for decades, protein-dense sprouting is the future of affordable plant-based protein supplements.

### POTASSIUM.

A soft metal very similar to sodium and calcium, potassium is both a mineral and a charged electrolyte responsible for nerve signaling, muscle contraction, overall hydration, rebuilding damaged tissue, and regulating blood pressure and acidity. Potassium is commonly recommended for individuals at risk from high sodium diets. While it's known that heavily starchy foods such as bananas, potatoes, and avocados contain the most amount of potassium, some sprouting favorites that can supplement the Recommended Daily Average (RDA) include sprouted bean, lentil, broccoli, and Brussels sprouts. While store bought potassium supplements can be convenient, they also feature a synthetic form of the mineral that must be limited to 99mg per serving to minimize toxicity.

### SULFORAPHANE.

A chemical compound found almost exclusively in cruciferous vegetables such as cabbage, kale, cauliflower, and broccoli, sulforaphane has recently taken the sprouting world by storm as an essential nutrient and phytochemical. Recent studies have shown strong correlations between the intake of sulforaphane-rich foods and a significantly reduced risk of many forms of cancer. Sulforaphane is not actually a chemical produced by cruciferous plants, but is created instantaneously through chewing, causing an enzyme called myrosinase to react with glucoraphanin, producing sulforaphane right there on your tongue. Sulforaphane-rich sprouts such as broccoli are notorious for excreting a robust and pungent "sulfur-like" odor during sprouting. If not rinsed at least 2-3x daily, cruciferous sprouts quickly adopt an even worse odor.

### ZINC.

An essential trace element because only about 8 mg is required daily, dietary zinc is readily available in a variety of plant-based foods and sprouts such as legumes, grains, and quinoa. Zinc is a soft and brittle metal required for numerous bodily processes, most notably the production of nucleic acids such as RNA and DNA. Like other dietary metals, the body does not naturally produce and store zinc which can sometimes lead to a deficiency, noticeably marked by stunted growth, low insulin, loss of appetite, hair and weight. Zinc is directly responsible for gene expression, wound healing, nutrient absorption, child development, and for producing T-cell type white blood cells. Zinc is a relatively brittle metal liable to be completely destroyed by food processing, especially when milling whole grain into a refined flour.

# SPROUTING JOURNAL

## Sprouting Journal

SEED TYPE	DATE OF SEEDING	TIME OF SEEDING	SPROUTING METHOD

SEEDING RATE	DAILY RINSING	DATE OF HARVEST	NOTES

## Sprouting Journal

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