

Garlicana



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Seed Garlic from Garlicana

Welcome to the 2016 edition

Well, 2015 was a challenging year. After a warm winter and dry spring many varieties matured up to two weeks early. As the garlic was curing in the barn, a wildfire grew to encompass 28,000 acres and came within eyeshot of the farm. Fortunately, thanks to the efforts of wildland firefighters, no structural losses occurred in Tiller and, thanks in part to in stream restoration efforts, there was still a pool of water that serve as habitat for surviving populations of fish and other aquatic species. This winter is considerably wetter and there's significant snow pack in the higher elevations. At this point in the winter, the soil is cold and wet, which is just what the garlic needs. This will be the eleventh year of work on garlic breeding and we are trialling dozens of new clones grown out from true seed. It takes time to select worthwhile varieties and propagate enough to offer here. It is very exciting to see new, genetically diverse garlics that show great vigor or express unique characteristics. For this year, there are five offerings that were grown out from true seed but many more are on the way. While true seed has been of particular interest, here you will a very diverse selection of seventy garlic varieties comprising ten horticultural groups, others which do not neatly classify as well as garlics collected from the wild. Additionally there are seven shallot varieties with differing characteristics. Lots to explore in this corner of the allium world.

Introduction

Garlic is from the genus *Allium* and the species *sativum*. It is one of the oldest known cultivated crops. Historical references date back nearly 6000 years. Clay representations of garlic that were found in Egyptian tombs have been dated back as far as 3750 BCE. Babylonians used garlic 4500 years ago and there are references in China that suggest its cultivation there as far back as 4000 years ago. Its center of origin, however, is Central Asia, an area stretching between the Caspian Sea and Western China. The Great Silk Road travels through this region which is the only place where true wild garlic grows. Because of garlic's ability to store and adapt, as well as its culinary and medicinal attributes, traders brought garlic with them and it spread east, through China, went south through India and SE Asia. They carried it west, across the Caspian Sea to the Caucasus Mountain region which was its primary point of distribution to Europe and the Middle East. Variation has occurred over it's long history through mutation as it was subject to vastly differing climates, latitudes, soil types, etc. resulting in hundreds of regionally adapted cultivated varieties. It is common in the West to appropriate from people and cultures the world over. We find it important to learn about and honor those people and places which these garlics are from. You will find here a smattering of hyperlinks, mostly to Wikipedia pages associated with places from which these garlics originated. Represented here are samples of the very genetic material our ancestors have grown, traveled with and consumed for over six millennia. The history of garlic is our own and people who live in small villages in faraway places are closer to us than it may appear.

True Seed

Even in the wild, garlic reproduces *asexually*, one clove becomes a bulb. However, garlic has the ability to be propagated *sexually* which has become a area of keen interest in my work. To this end, in collaboration with my friend Ted Meredith, i have been producing true seed, attempting to breed new varieties and growing out virus free clonal materiel. We co-authored an article, [Growing Garlic from True Seed](#), published in the 2012 spring edition of Seed Savers Exchange "Heritage Farm Companion", a sort of how-to, on saving true seed from garlic. We are pleased by the response and interest in this process. I have had a number of inquires as to which garlic varieties would be likely candidates for seed saving and have tried in the following listings to mention when i've successfully

procured seed. With every successive generation, there's an increase in seed set and germination rate. There is a lot of trialling in the process and it will take a number of seasons to grow out enough of the best of these new clones of 1st generation progeny to make available. Eventually, subsequent generations will be offered as well. We did not invent this process and while it isn't the easiest vegetable seed to save, anyone can do it and the results can be very rewarding. It must be said that while years of work have been put into this and there's years of work to come in breeding new, more resilient varieties, we will not be filing for PVP status, or utility patents and heap scorn on anyone who does. We believe the process of all traditional seed breeding should remain in the public domain. If the products of such efforts result in wide circulation then perhaps that's a measure of its success. That being said, within a few years true garlic seed will likely be marketed commercially by large agricultural concerns. Some very brilliant researchers have been well funded to produce true seed, we assume, primarily for use in agribusiness and perhaps pharmaceuticals. Given the time and expense that's gone into producing those seeds, they will certainly be patented property. The process, however, with which true garlic seed is obtained is *not* the intellectual property of any corporation and we encourage garlic growing aficionados to experiment, to create new varieties and keep plant diversity beyond the clutch of agribusiness.

Classification

Most garlic can be classified into ten somewhat arbitrarily named horticultural groups and there are a number of garlics that defy such categorization. This system, popular in North America, grew out of the observations of Ron England and is largely backed by a 1993 study by Margaret Pooler and Phillip Simon which used isozymes as molecular markers to identify varieties. The purpose of classification systems is to facilitate understanding of our subject, offering us lenses through which to gaze. Observation has been the primary means by which we classify the flora and fauna of the world. Classification can be tricky as the appearance of garlics can vary somewhat by latitude, climate, soil, cultivation methods, etc. We have been aided in our contemporary understanding of this ancient plant by periodic studies that have used varying techniques. For example, DNA testing has superseded isozymes testing to analyze, compare and contrast subjects while a landmark 2004 study by Gale Volk and colleagues used “amplified fragment length polymorphisms” or AFLP to genetically fingerprint accessions (units within a collection) both in commercial circulation and in seed banks. While genetic analysis is helpful, albeit rather expensive, it is not a substitute for detailed observation of physical characteristics of a plant, known as *morphology*. When we take stock of a plant's morphology we look at its leaves: their color, shape, structure and number; the scape, if present, and its umbel; the flowers: their shape, the colors of the petals, anthers and stigmas; the bulbils: their size and number; and, of course, the bulb: shape, clove count, configuration, colors, size, flavor, texture and many other subtle variations. Most of the cultivars listed here can be readily lumped into the groups below. The most variation occurs between groups, less so of cultivars within a group. Some garlic strains, particularly those found in the wild in their native Central Asia, do not neatly fit into these groups. We are interested in seeing all the shapes, colors and flavors that garlic can express and offer as much of that diversity as possible.

About the Farm

Garlicana is a very small farm that lies on the border between the Cascade and Klamath Mountains in southwestern Oregon on a tributary of the South Umpqua River. The elevation is around 1,340'. Winters are cool and damp but temperate. Winter lows are generally in the teens and summer highs can hit the triple digits. The mineral rich, clay loam soil seldom freezes for long. While flavor characteristics of most garlics listed here are briefly described, this is highly subjective and these may not hold true outside this location. A garlic that's been acclimatized in one bio-region may look and taste quite differently after a few years in another. The flavor of some garlic is brought out by sustained winter freezing temperatures. The pungency of garlic is affected by soil sulfur content, the

color by iron content. Garlic is day length sensitive and clove number and size are influenced by latitude, among other factors. As many cultivars are grown in very small quantities, availability of any given variety may be limited. Planting, mulching, weeding, harvesting and cleaning is done by hand. **No chemical fertilizers, herbicides, pesticides or fungicides are used and careful attention is paid to sustainable soil practices.** A four year rotation basis includes cover crops, many varieties of potatoes, a diversity of vegetables both for fresh market and seed production and, of course, alliums. This farm is located on a creek that has seen a return of endangered coho salmon and is host to myriad other species, in spite of being devastated by clear cut logging, herbicide spraying and forest mismanagement. We support, encourage and actively participate in watershed restoration. This involves the reintroduction and proliferation of beavers which, as a keystone species, are a necessary and intrinsic part of our ecosystem. The decisions we make about farming are reflective of our stewardship of the land and stream during our time on this Earth.

Sources

We have sought samples of garlic from all over the Earth and, with care and patience, let them adapt here. While some standards are offered, we specialize in less common cultivars, many of which are less productive, thus do not make it into broad commercial circulation. Garlic varieties listed here come from a number of sources. These include friends and family who've brought samples from their travels, other members of Seed Savers Exchange, samples from seed banks like Gatersleben, in Germany, and the National Plant Germplasm System (NPGS) of the USDA whose garlic collection is curated by Barbara Hellier and is based in Pullman, WA. You will find that next to the names of a number of cultivars listed there is a PI or W6 followed by a number. These are accession numbers assigned to garlics (and all other plant material) in the USDA collection. There are dozens, perhaps hundreds of garlic varieties in commercial circulation, many of which are duplicates. In the interest of curtailing this, we have listed these numbers where they match with varieties in, or that came from, the national collection (including accessions we have donated). Varieties from which we have produced true seed are indicated by this symbol: 

How much to plant?

Here is the basic formula: measure your row length in inches. *Divide* that number by your in-row plant spacing (we generally recommend 6"), then *multiply* that by the number of rows. This will be the number of cloves you can fit in your space. We have given approximations of clove count per pound, variable though they may be. For example, a ten foot long bed is 120" divided by 6 is 20, multiplied by 4 rows is 80 cloves.

Most of what we ship will be over 2", some up to 3" though some varieties do not produce large bulbs. Largest bulbs will be sent on a first come first served basis. Some prefer smaller heads as you get more cloves per pound. This season there are around 90 accessions, 70 of which are offered here. Some of these are rare and/or unusual and represent diversity in the species; these varieties are generally smaller in size and are grown in *very small* quantities. In the interest of making some of these available, these will be limited to ¼ pound samples.

Garlic Prices

Polish White Artichoke and all Silverskins: \$12 per half pound, \$18 per pound

All other garlic varieties:

\$14 per half pound, \$20 per pound

1/4 lb. samples for all varieties are \$8 Note that ¼ lb samples will generally include smaller bulbs.

Bulk Prices: varieties are noted as "*bulk available*" and eligible for bulk quantity discounts: 10-20 lbs. 10% off, 20-40 lbs. \$15% off.

New offerings for 2016

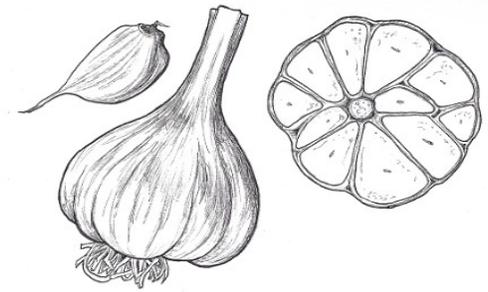
Tazatazat: Azataza on T

Agljo Rossa: a mellifluous mouthful from Italy

Corsican Red: sweet garlic with a salty character

Jade Rose: early blossom from the far east

Ozodlik: Kishlyk's child born free



VARIETIES

TURBAN garlics are highly adaptable to different climates having been found from tropical Southeast Asia to arid Central Asia, to the Pyrenees and surrounding lowlands. Here in Southern Oregon, where they are some of the first to emerge and earliest to mature, the scapes seldom have time to coil before they ready to harvest. The plants have wide floppy leaves and bolt weakly, forming scapes with red tinged umbels. Due to the lack of fiber in the leaves, they are ideal for garlic greens pesto and well suited for early greens production. The stems are weak, thus pliable enough to braid. The outer bulb wrappers have beautiful dark purple striping revealing 10-12 plump salmon colored cloves per head, 45-60 cloves per pound. They are generally mild in heat with a nice earthy flavor, and will store around 7 months. Turbans are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Bangkok: when acquired at a market in the Thai capital, this was a small white bulb with pale cloves but after two seasons of adaptation became a large Turban with typical fat pink cloves inside violet wrapped bulbs. *Bulk available*

Basque Turban: from an enthusiastic Basque farmer in the small town of Corella in the autonomous province of [Navarre](#) (Nafarroa), Spain. It has a quick heat when eaten raw, fading into an earthy finish. In the Basque language garlic is “baratxuri”. *Bulk available.*

Tashkent Turban: this comes from a market in the capital of [Uzbekistan](#), one of the most repressive countries in the world today. It has, perhaps, the darkest coloration of Turbans we've trialled and matures a day or so after the others. 10 lb. limit

Topal: this unique Turban is distinguishable from the others by an admittedly less than highly sought quality: its lack of outer wrapper coloration. It does look good in a braid contrasted with the other more purple Turbans. ½ lb. limit

ASIATIC: there is wide variation between Asiatic strains. Asia is a large continent with radically diverse climates, peoples, as well as garlics. Generally, these are garlics that migrated east from Central Asia, through China and out to the Pacific coast. Some of these varieties will shoot up and mature early, while others are among the last to emerge and mature mid season. They have divergent leaf shapes and growth habits as well as bulb shapes and clove configurations. One thing they share in common is a distinctive umbel capsule which can become quite elongated, sometimes containing very large dark purple bulbils. At Garlicana most Asiatic strains will produce bulbils low or midway up the stem. While it is unnecessary to remove the scape to achieve a sizable head, it doesn't hurt either. These are listed roughly in order of maturity. Clove count per pound is highly variable between strains. Asiatics are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Laos (W6 35700) From [Louangphrabang](#), Laos. This small, irregularly shaped garlic has a sweet spicy flavor. It has very droopy frond like leaves and matures very early. It may perform better in a milder winter climate but here it is still adapting and is more of a curiosity for the alliphile than a marketable strain. ¼ lb. limit

Singing Falls (W6 35698) A neighbor found a clump of this unusual garlic growing in her yard. It had been grown by a previous owner who died in the 70s and it was growing feral until 03. It's origin is unknown. Singing Falls is named for a nearby waterfall by which indigenous women had their birthing ceremonies, though likely the garlic came with European settlers. Given its morphology, it fits in with other garlics of east Asian origin and it's possible that it came with [Chinese immigrants](#) who began settling in SW Oregon in the mid 19th century. The plants have extremely vertical leaf architecture and the spathes are often translucent revealing multiple sets of scapes within. It matures very early and has small to medium bulbs, white with purple blushing and 8-14 mahogany colored cloves. It's skins are thick and easy to peel. The flavor is rich, complex and best appreciated raw when the garlic is still fresh and juicy. 2 lb. limit

Russian Redstreak: it is claimed to be a mutation of the Rocambole strain Russian Red, this variety produces large bulbs with beautiful purple-white streaked overlapping wrappers with 3-6 enormous dark purple cloves. It has a lazily sprawling growth habit and matures early. The taste is like a fireball across the tongue which holds up over its long storage life. 2 lb. limit

Sakura (W6 35658) aka Japanese, from an elderly Japanese gardener in WA state. It has broad closely spaced leaves, with bulbils that form mid stem and matures early. It produces large white bulbs with 5-7 plump cloves. Sakura bulbs can quickly overmature, opening up during curing so special attention is beneficial near harvest time. Sakura has the sweetest flavor of all garlics trialled here; quite pleasant eaten raw. Ninniku is the Japanese word for garlic. 5 lb. limit

Takayama: from a market in the highland city of [Takayama](#), central Japan. The plants emerge early and have rigid vertical leaves, towering over other Asiatic strains. Despite it's early growth, it matures along with the later varieties below. Its rich, complex flavor slowly builds to a piquant finish. It has adapted very well here producing medium-large very tight bulbs with purple blushing and 5-6 dark colored cloves. Good storage. 5 lb. limit

Pyongyang: from the countryside surrounding the [North Korean](#) capital. It has wide, pale leaves and sprawling growth habit. Purple streaked white bulbs with 6-8 crimson-purple, tear drop shaped cloves on medium sized bulbs, spicy flavor, astounding volatility and a lengthy shelf life. It matures mid season. 10 lb. limit

Asian Tempest (PI 615431) from [South Korea](#). Medium to large bulbs with 6-8 plump, conical cloves, it's the last Asiatic to mature. It has a bright, hot flavor and pretty good storage. Garlic in the Korean language is "manul." 5 lb. limit

Munhung another North Korean variety. Tall, plants with lighter green leaves, the slightly asymmetrical bulbs have white wrappers with some purple streaking and blushing on the cloves. Medium heat building to a late bite on the back of the palette raw. 1 lb. limit

Wonha: 20 miles north of Pyongyang lies the village of Wonha where this garlic is from. Shorter plants with darker leaves, the bulbs feature 5-7 plump purple cloves and a flavor that builds to a bright heat which quickly fades. 1 lb. limit

ARTICHOKE garlics are so named due to their overlapping layers of cloves. When stressed they can bolt but usually they have no true flower stalk, making them suitable for braiding. Easy to grow, Artichoke varieties have broad leaves and a sprawling growth habit. The bulbs mature mid season, are round and can get quite large. They have a simple flavor, are generally mild in heat and can store up to nine months from harvest. Artichokes may produce 60-70 cloves per pound.

Artichokes are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb. *except* for Polish White.

Polish White is your typical Artichoke variety: large, often enormous, flat bottomed bulbs with some light purple blushing on wrappers enclosing 9-15 cloves. This has been the most consistently productive Artichoke of the dozen or so we've trialed and this is an ideal garlic for CSAs. It was brought to Clarendon, New York by the Cznowski family: fur trading Polish immigrants circa 1900. Initially mild and aromatic, it gains pungency over the course of its long shelf life of up to 10 months. Polish White is \$8 per ¼ lb; \$12 per ½ lb; \$18 per lb. *Bulk available.*

Ail de Pays Parne: from the northern French village of Parnes, this variety has darker purple coloration on the wrappers than than other Artichokes, though bulbs tend to be slightly smaller and have fewer cloves per bulb as well. “Ail” is the word for garlic in French and this one has a mild, sweet flavor. 1 lb. limit

Beekeepers' Sicilian: this very unusual Artichoke has only 5-6 massive cloves in a single layer. It matures earlier than other Artichoke varieties but, in other respects it is like the others with their characteristic leaf architecture, simple flavor and excellent storage. Brought to Wisconsin by Sicilian immigrants in the 1920s, who, as the name suggests, were beekeepers by trade. 10 lb. limit

Corsican Red: This strain from the Mediterranean island of [Corsica](#), birthplace of Napoléon, has more red coloration than the other Artichokes. Corsican history is colorful as well. Conquered by just about every regional empire at some point, it has been under French rule since 1768. After forty years of often violent independence struggles, nationalists have gained power. A destination sought by tourists and of late, refugees; it also has one of the highest per capita murder rates in Europe, largely mafia related assassinations. The word for garlic in Corsican is nearly the same as in Italian: “aglia” The garlic is mild with a fresh green flavor, well suited to Mediterranean cuisine. 1 lb. limit

GLAZED garlics produce large, often enormous, squat bulbs with 10-14 cloves which have thin satiny clove skins. Susceptible to desiccation in very dry conditions they are tolerant of higher humidity in storage. The plants are characterized by beautiful, dark, blue-green leaves with a upright growth habit making them ideal for green garlic production, and slender scapes which can form tight pretzel-like coils. Glazed garlics will produce 50-60 cloves per pound. Glazed garlic is \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Vekak: large bulbs with vivid coloration, very rich flavor and consistent yields make Vekak an exceptional garlic. From the small agrarian town of Poběžovice, Czech Republic, near the border with Bavaria and the Bohemian Forest. Dr. Boris Andrst, a retired ophthalmologist from NY acquired this and a number of other varieties from a farmer in Bohemia. Many of these varieties made it into commercial circulation in the U.S., though often with slightly misspelled names (Vekak is actually “Vekan”). Poběžovice once had a thriving Jewish community and a famous local mikveh (ritual bath) was a place of pilgrimage. The Jews perished in the Holocaust and their synagogue was destroyed. *Bulk available.*

Purple Glazer: from Mchadijvari, Republic of Georgia, north of the capital T'blisi, near the border with South Ossetia. Purple Glazer has blue-purple clove coloration and a darker flavor than Vekak. It matures later as well. 5 lb. limit

CREOLE varieties originate in [Euzkadi](#) (the Basque Country) and surrounding Spanish and French regions on both sides of the [Pyrenees Mountains](#). They readily adapt to warmer climates and can be finicky growers in chilly winter climates but are well worth the extra attention. They are somewhat low growing with broad leaves. During spring growth, plants should be monitored for leaves that die, then collar and constrict emerging new leaves. Creoles generally bolt here in SW Oregon, their weak scapes seldom coil and are very tender, thus ideal for scape pesto. While they

aren't the largest of garlics, Creoles have outstanding storage capacity, excellent flavor and gorgeous deep red clove coloration. We see two basic types: smaller bulbs with fewer but larger cloves and larger bulbs which produce more, yet smaller cloves. A pound will yield 40-55 cloves. Creoles are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Aglio Rossa (aka Rossa di Sulmona) As the former name translates as “red garlic”, the latter is more fitting. It is from the outskirts of Sulmona in the L'Aquila province of [Abruzzo](#) region in central Italy. While the Abruzzo features a good deal of Agriculture, Sulmona is presently more of a tourist destination. It was the birthplace of anarchist [Carlo Tresca](#), a labor organizer who came to the U.S. in the early 20th century. He spoke out against communism, capitalism, fascism as well as the mafia; he was assassinated in 1943. The garlic has 8-12 blood red cloves. Its sweet flavor comes through when raw and holds well over its long storage life. ½ lb. limit

Creole Red: from a California virus free program, original source unknown. White bulb wrappers with 6-8 dark red cloves, it has a quite hot complex flavor. It features the largest clove size of the Creole types though not necessarily the biggest bulbs. 10 lb. limit

Donostia Red: from a market in Donostia, Euzkadi, aka [San Sebastián](#), Spain and widely grown throughout the Basque Country. It has 8-12 crimson cloves on bulbs with white wrappers. This is has been the most consistently productive Creole here and produces some 2 ½” bulbs. *Bulk available.*

Germindor: from southern France, it has 6-8 cloves, some quite plump, on medium bulbs with excellent flavor. 1lb. limit

Guatemalan: spicy Creole that is likely the same as “Guatemalan Ikeda” which is from the village of Aguacatan in the western central highland province of Huehuetenango. The Awakateko speaking Mayans of Aguacatan suffered much violence and bloodshed at the hands of government forces during the early 1980s period of the [Guatemalan Civil War](#). The garlic matures a few days ahead of the others. 1lb. limit

Moroccan: another 8-12 cloved Creole with it's characteristic deep red cloves. It is a little less spicy than the other Creoles but fine flavored nonetheless. This is from an open market in coastal city of [Essaurira](#), Morocco by way of Amyo Farm in NM. 2 lb. limit

Rose du Lautrec: the name refers to garlic grown in a region of Southwestern France. There are supposedly four Creole varieties that can be called “Rose du Lautrec”: Edenrose, Goulurose, Iberose and Jardirose (no genetic fingerprinting has been done to verify whether these are distinct genotypes). Which of the four this is, we don't know. It is one of the smaller 6-8 cloved Creole types with plump cloves and the same fine flavor. 3 lb. limit

PORCELAIN garlic originates in the [Caucasus Mountain](#) range, which stretches between the Black Sea and the Caspian Sea, near the western edge of the Silk Road which was a primary distribution point. From there, garlic was taken south, into the Middle East, or northwest, into Europe. The plants are tall with broad leaves, the scapes form wider loops rather than coils. The bulbs have white wrappers with 4-7 very large tannish red cloves, producing 30-40 cloves per pound. They mature late, are quite pungent and will store 6-8 months. According to the Ft. Collins genetic fingerprinting study, most Porcelains tested are identical. These include well known varieties like Music, Georgian Crystal, Georgian Fire, German Porcelain, etc. Variety trials here in SW Oregon with a dozen or so varieties over successive seasons largely confirms those findings. Porcelains seem more susceptible to viral pressure than other types and varieties that have declined have been regularly discontinued. Fortunately, some of them are capable of sexual reproduction and new clones grown out from true seed show greatly increased vigor. These seed grown cultivars will also introduce much needed diversity to this limited gene pool. Porcelains are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Krasnodar White: ☞ consistently productive year after year, the plant is noticeably taller than other Porcelains and most other garlic cultivars; it's peppery and sulfurous raw, nutty and starchy when roasted. The garlic was acquired in the city of Krasnodar which lies in the southwest of Russia near the Black Sea. Founded at the end of the 18th century as a military outpost for Russian expansion into the Caucasus, by the Kuban Cossacks who acted as imperial foot soldiers that carried out the mass ethnic cleansing of the region's now former inhabitants: the [Circassians](#). Also in the [Krasnodar Province](#) is the southern city of Sochi, better known as the site of the 2014 Winter Olympics and under which lie the mass graves of the Circassian people. *Bulk available.*

Tazatazat ☞ This is the progeny of Azataza, a variety named, saved seed from and since discontinued. Tazatazat has surpassed its parent by leagues. An immense Porcelain that one might mistake for a cudgel rather than garlic plant when harvested. The plants are visibly different from other Porcelains with more leaves and darker color. It showed no brooming, though in 2015 it threw a number of tennis ball sized rounds. Tazatazat is eye wateringly hot. Its stability is yet to be determined but will be offered in limited quantities for 2016. It is a prolific seed producer and its progeny are being grown out for trial. *1 lb. orders only this year.*

Arsia: ☞ This is the first generation progeny of Krasnodar White. It is named for the southernmost volcano in the equatorial Tharsis Mountain Range on Mars. [Arsia Mons](#) stands twelve miles high two hundred seventy miles in diameter. Sumptuously sulfurous, it expresses all the characteristics of a Porcelain garlic with white wrappers sheathing reddish, long cloves. Of the first gen progeny of Krasnodar White progeny, this was the most stable and best keeping. It is also a prolific producer of true seed and in the coming seasons some of its progeny will be offered. *Bulk available.*

ROCAMBOLE garlics are stocky plants with broad closely spaced leaves and scapes that form tight coils. They have rich, well rounded, outstanding flavor which is brought out by cold winter temperatures. Most Rocambole strains have a tendency to produce “doubles.” This is when there are two or more cloves, often enjoined in flesh, in a single clove wrapper. While this is a boon in the kitchen, planting double cloves will result in two (or more) plants that become smaller bulbs. Rocamboles are easy to peel due to loose clove skins and, consequently, they are susceptible to desiccation, thus store poorly; however, they are tolerant to higher humidity in storage than those from most other horticultural groups. Rocamboles will produce approximately 50-60 cloves per pound. Rocamboles are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Carpathian (W6 35656) Fabulously flavored garlic from southern Poland in the western [Carpathian Mountains](#) which stretch nearly a thousand miles through Central and Eastern Europe. 1 lb. limit

Russian Red: medium bulbs with 6-8 brown cloves with a bit of darker purple-red blush, it has a full rounded flavor. Brought to Canada in the 19th century by [Doukhobor](#) refugees, who fled religious persecution in the Russian Empire. The Doukhobors were a devout sect of Anabaptist Christians that were obstinately anti-government and pacifist, refusing pledge allegiance to the Tsar, much less serve in his military. They resided in southern Georgia before migrating to Saskatchewan with the aid of such seminal figures as Leo Tolstoy and the anarchist, Pytor Kropotkin. It seems likely that they picked up the garlic from Georgia, carrying it with them to where most eventually settled in British Columbia. 1 lb. limit

Osage: small to medium bulbs with 5-7 reddish brown cloves. Said to be cultivated by the [Osage Indians](#) as far back as the early 18th century. The Osage had good trade relations with the French who likely introduced this Rocambole to the tribe who resided in what is now Western Missouri. They were, like most Native Americans, forcibly displaced from their traditional lands by the U.S. Government. 2 lb. limit

PURPLE STRIPE garlics are ancestral to all other domesticated strains according to the Ft. Collins study. Initial leaf growth is epigeal: sprawling leaves stretched out lazily over the soil. Eventually they reach for the sun with slender, paler leaves. They have white bulb wrappers with 8-12 vividly colored, tall, crescent shaped cloves with elongated tips. They store moderately well but readily sprout when treated to high humidity. Many cultivars are fertile and capable of producing true seed. One pound of Purple Stripe will yield 50-60 cloves, though this is variable. Purple Stripes are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Kishlyk: See description under Wild Garlics.

Navistar: See description under True Seed Progeny.

Novo Troitzk (W6 26171) ☞ Procured at a market in the city of [Aktöbe](#) in NW Kazakhstan and grown in the surrounding country side. The has become the highest yielding Purple Stripe grown here. It has a rich spicy flavor raw but quite sweet when baked. 5 lb. limit

Shatili (W6 35683) The highland village of Shatili on the Georgian border with Chechnya is home to [Khvesurs](#) and Kists and best known for its impressive [stone fortresses](#) and towers. It was also a conduit for Chechen refugees fleeing Russian bombardments during the wars in the 1990s and early 2000s. Excellent flavor, though it's smaller than the other Purple Stripes. 1 lb. limit

Shavat: See description under Wild Garlics.

Shvelisi (W6 35657) ☞ From the village of Shvelisi in western [Republic of Georgia](#) near the Turkish border. Consistently productive, it has a rich flavor, excellent raw and sweet roasted. Inner wrapper and cloves are fuchsia colored. It more commonly known by the ironic moniker “Chesnok Red.” “Chesnok” is the Russian (and related languages) word for garlic. If the 2008 Russian invasion of Georgia is indicative of the less than harmonious relationship between the two countries, they have even less in common linguistically. In Georgian the word for garlic is “niori”. *Bulk available.*

Verchnyava Mcara (PI 540356) ☞ White wrappers with vibrant reddish clove coloration and complex flavor characterize this cultivar from [Abkhazia](#). Located in the NW of the Republic of Georgia, Abkhazia seceded after a war for independence in the early 90s, expelling over 100,000 Georgians (mainly ethnic Svans and Mingrelians) in the process. While Georgia still claims this territory as its own; independent Abkhazia was recognized by Russia (as well as Nicaragua, Nauru and Venezuela) after another round of warfare in '08. The Abkhaz language is distinct from Georgian and is considered part of the “North Caucasian language group.” It has only two distinctive vowels but fifty-eight consonants. Verchnyava Mcara is from a village near the Black Sea coast, north of the capital, Sukhum. 5 lb. limit

MARBLED garlic plants are tall, have wide curvaceous leaves and stout scapes that are ideal for grilling. Often dappled with dark purple, bulbs can get quite large and contain 5-6 squat tan to brown cloves with thick skins that are relatively easy to peel. A small percentage of Marbled will produce weak stems that become pliable enough to enable braiding. Marbleds store fairly well and tend to be quite pungent. Some of these have produced true seed. A pound of Marbled seed garlic will yield 35-40 cloves. Marbleds are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Bai Pi Suan: ☞ from the far west China province of [Xinjiang](#), homeland of the [Uyghur](#) and [Xibe](#) peoples, comes this spicy, colorful strain. The Uyghur language is Turkic like those of other Central Asian peoples with whom they are related. As Han Chinese have moved in increasing numbers into Xinjiang, the Uyghurs have been shut out of employment opportunities, been religiously persecuted and find their language and culture eroded away. Like their Tibetan counterparts they've grown restive under the rule of the ever expanding Han Chinese resulting in further repression. One thing both Uyghur and Xibe have in common with the Han is that garlic favors heavily in their cuisines and this

fiery garlic may have been consumed by all over the last few thousand years. 5 lb. limit

Brown Vesper: ⌘ collected by garlic researcher Maria Jenderek in the former Soviet Union, Brown Vesper is an exceptional cultivar in that it is earlier emerging, taller, has darker green leaves and a more vertical leaf architecture than any other Marbled strain. It also matures earlier, though has shorter dormancy and doesn't get as large. It's not as hot as others but is quite flavorful nonetheless. This has also been a prolific producer of true seed. 1 lb. limit

Dujanskig ⌘ was acquired by John Swenson at a market in Ashgabat, the capital city of Turkmenistan. Dujanskig's leaves are a little paler and more sprawling than other Marbleds and its raw flavor is complex, the heat building and subsiding in waves. While its yields vary a bit year to year, it is an outstanding, richly colored strain and has produced true seed. 2 lb. limit

Khabar: Acquired from the eastern Siberian city of [Khabarovsk](#), this Marbled strain is the most consistently productive here year after year. Quite pungent, it starts hot, gets hotter, then lingers. Khabarovsk lies at the confluence of the Ussuri and Amur rivers and close to the border with China. In August 2013 the [Amur River](#) experienced record setting floods, displacing hundreds of thousands of people and inundating nearly 800,000 hectares of farmland across the Russian Far East and China. *Bulk available.*

Russian Giant: sumptuously sulfurous, productive, enormous; original source unknown. 10lb. limit

Siberian: Said to have been procured by fishermen trading leafy greens for garlic with subsistence farmers on the [Kamchatka Peninsula](#) which lies east of the Siberian mainland. It is possible that Siberian and Khabar are duplicates given the geographical proximity of their origins: Kamchatka lies north of the mouth of the Amur River. Here at Garlicana, the morphology of the plants, bulbs as well as their flavors are indistinguishable: stocky with inwardly curvaceous lighter green leaves, thick scapes superb when roasted, large, potentially enormous, colorful heads with plump purple cloves and fiery raw flavor. *Bulk available.*

SILVERSKIN garlics are layered like Artichokes and are also adaptable to a range of growing conditions but may bolt when stressed by cold weather. They have 14-24 reddish cloves on oblong shaped bulbs with white wrappers. Silverskins mature late and are the most productive weight planted to weight yielded. Silverskins have a straight across simple flavor, up front bite and lingering pungency. While their tight clove skins make them more difficult peel, this makes them excellent keepers, tolerant of a broader range of temperature and humidity in storage than other garlic types. Silverskins are frequently used in garlic braids. A pound of Silverskin will produce 60-80 cloves. Silverskins are \$8 per ¼ lb; \$12 per ½ lb; \$18 per lb.

Mt. St. Helens: said to be an heirloom from Western Washington, this is a productive, long storing Silverskin. Like its namesake, it is volatile and pungent. It has white wrappers with yellow streaking and 14-18 pink-red striped cloves. *Bulk available.*

Nootka Rose (W6 35678) Brought to [Waldron Island](#), Washington (in the San Juans) by homesteader Alice McDonald and passed down to the Bensel family of Nootka Rose Farm. Nootka Rose will produce up to 24 cloves per bulb. ½ lb. limit

Silver Rose was named by Greg Lutovsky who got it from Basic Foods (now Gilroy Foods). This is likely one of the two standard California garlics commonly found in grocery stores. The industry grows it for a reason: it's consistently productive and keeps remarkably well. While it yields higher than the other Silverskins, it's more susceptible to bolting during cold wet springs. *Bulk available.*

Bolivian: from an open market in the highland city of [La Paz](#), elevation nearly 12,000 feet, this Silverskin has many diminutive cloves that would be a chore to peel freshly harvested but when most other varieties have turned soft, this one is still crisp and pungent. It has stored up to 18 months! It is the last garlic to make it to a well deserved place at the table (or the skillet, as it were). ½ lb. limit

Greek: quite similar to the Bolivian in size and shape, stores just as well, and is one of the last varieties to mature. “Skordo” is the Greek word for garlic. ¼ lb. limit

WILD GARLICS are those that were collected in their center of origin, Central Asia, by various individuals, often from tiny bulbs or bulbils. Brought back, they've been grown out at the USDA's Western Regional Plant Introduction Station in Pullman, WA. While these have been classed as *A. longicuspis*, there is no genetic distinction between garlics collected in the wild and those that have been long domesticated. For the most part, these accessions do not classify into the above groupings. Some are capable of producing true seed, others not. They all tend to be vigorous, perhaps due to the fact that they haven't been in domesticity long enough to accrue viruses that imbue long cultivated varieties. Wild garlics are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Arpakalen (W6 24414) Collected from the wild near Arpakalen, [Turkmenistan](#) by Richard Hannon, this garlic has 5-8 elongated large cloves in irregularly shaped bulbs with dark purple striped wrappers. The stem is sometimes strangely coiled inside the bulbs. The plants are quite tall with blue-green leaves. Arpakalen matures early-mid season along with the Artichokes. Turkmenistan, roughly the size of California, is mostly desert. Coming from such arid origins, this is a vigorous strain indeed. It is mild in pungency and peels easily, thus is susceptible to desiccation. 2 lb. limit

Chimyan (W6 46684) ☞ was collected from the wild by Barbara Hellier and Phillip Simon near Chimyan Mountain in the Western Tien Shan Range in Uzbekistan. This outstanding strain features tall, vigorous plants with broad dark green leaves matures mid-late season. Bulbs appear Marbled with 4-7 large cloves with a deep, rich, earthy flavor. Chimyan is the most prolific producer of true seed we have trialled and several of it's offspring are currently being grown out in trial. *Bulk available.*

Gadym Sarymsak (W6 24371) means “ancient garlic” in Turkmen (a Turkic language) It was collected from a dry river bed Turkmenistan, also by Richard Hannon. Tall plants with broad leaves and sprawling growth habit. This is the first variety to scape and it matures early. Irregularly shaped bulbs can get large and, like Arpakalen, some bulbs have coiled stems inside. It is easy to peel and has a mild vegetative flavor. ¼ lb. limit

Jaxartes (W6 48169) ☞ This is also from fields surrounding the village of Puntuk from northernmost Tajikistan near the [Syr Darya](#) river. The earliest known name for the longest river in Central Asia was Jaxartes, from the ancient Greeks. This once great river originates in the Tien Shan mountains and drains into what remains of the Aral Sea. One can imagine traders traveling the length (over 1,300 miles) of the river with, amongst other items, garlic, bringing it to lands far beyond its wild roots. Since the Soviet Era, the Syr Darya river has been diverted for agriculture, predominantly cotton, which resulted in turning what was once the 4th largest inland ocean into a dried up dust bowl. Windstorms laden with salt and toxic pesticide residues have resulted in endemic respiratory illnesses throughout that region and incalculable losses of flora and fauna. The garlic is immense. The plants tower over others, maturing late. The bulbs containing 6-8 cloves, are very large indeed. The flavor is hot and sulfurous when raw but makes for a nice nutty baking bulb. 5 lb. limit

Kishlyk (W6 46687) ☞ Collected from the wild near Kishlyk, in southern Kashkadarya (Qashqadaryo) region of Uzbekistan. Large bulbs appear Purple Stripe with the characteristic crescent shaped cloves and purple coloration, though not as uniformly round; the plants are taller as well, with darker green leaves and quite vigorous. This is an outstanding strain and *the most productive bolting garlic grown here.* Towards maturity, the fibrous leaves tend to splay out. It has a splendid complex flavor with moderate pungency. It's has excellent storage, holding into the following spring. *Bulk available*

Pskem: collected from the wild in the Pskem River Valley in eastern Uzbekistan, this is a sharp flavored garlic with 4-6 plump, purple, elongated cloves. ½ lb. limit

Punuk (W6 27971)  collected in a field near the village of Punuk, in NW Tajikistan, medium-large bulbs with 6-7 plump purple cloves. Complex flavor that starts sweet and builds to bright fiery finish. It has been a prolific producer of true seed. Tajik language is a dialect of Farsi, the language of Iran where garlic is “sir”. The word for garlic in Tajik is “sirpiyoz” 2 lb. limit

Shavat (W6 48168)  collected in a pasture between the villages of Rovakom and Saro, in the Sughd Province of NW Tajikistan. Tight richly colored purple wrappers surround 6-9 cloves. This is quite spicy but the heat doesn't linger; when lightly sautéed it's bright flavor retains a sharpness. Of the wild garlics, this fits closest to the Purple Stripe group. 2 lb. limit

UNCLASSIFIED garlics are those that in my observations do not easily fall in to other groups when grown in my latitude, climate and soil. They have been subject neither to molecular nor genetic analysis. Unclassified garlics are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Belarus (PI 540355) Early to emerge, [Belarus](#) grows tall with semi-vertical leaf architecture. It matures early and it has a wide root base and ribbed roots which can make harvest a challenge in wet soil. One wonders what rugged conditions it had to adapt to that resulted in this mutation. While Belarus remains the last outright European dictatorship, this unusual garlic likely arrived long before the country's boundaries were defined. White bulbs have 7-9 purple blushed cloves and it has a very rich rounded flavor. 1/2 lb. limit

Cusco: acquired at an open market in the high Andian city of [Cusco](#), Peru, elevation 11,150 feet. Spanish Conquistadors were responsible for countless atrocities during the years of colonization, slaughtering and exploiting indigenous peoples, while taking back to Europe everything from silver to the potato. One of the few things they introduced to the Americas other than smallpox and other infectious diseases, was garlic. This is quite likely how this odd gem made it to the Peruvian highlands. It has small-medium bulbs with 6-7 squat cloves, and a sweet flavor with a brief but sharp bite. *It has the distinction of being the first garlic to mature.* It took a few years for this to adapt here but it's been improving in vigor and size every season. 1 lb. limit

Ferganski aka **Wild Fire** (W6 1885)  medium white bulbs with some purple streaking, it has 5-6 tannish-red cloves, matures mid season. It has bright flavor but not too hot. Acquired at a market in Tashkent, the name would imply that it came from the [Fergana Valley](#) in Uzbekistan. During the days of the Silk Road, cities in the Fergana were major trading hubs. On May 13, 2005 there were protests in one of those: Andijan. The protests were over poverty, corruption and repression. The government responded with military force and the massacre that followed took somewhere between 700-1,500 lives. Little has changed and today Uzbekistan has an abominable record on human rights as well as corruption. ½ lb. limit

Jade Rose: This very early maturing variety was procured in SW China. It has 5-6 cloves with light purple coloration. It stores remarkably well for such an early garlic and has a sweet flavor with a flash of bright heat. “Dà suàn” is Mandarin for garlic. ½ lb. limit

Lampang (W6 35699) From a roadside stand between [Lampang](#) and Lamphon, south of Chaing Mai, Thailand. This took 5 years to adapt but well worth it. It would still be better suited to a warmer winter at a more southern latitude but it's now producing sizable bulbs. It matures very early along with the Turbans, is medium sized with 6-8 squat cloves with purple mottling. Lampang has a sharp hot bite which lingers. 1lb. limit

Nepal (W6 2308) this very unusual garlic has 8-16 elongated cloves in two layers (the outer of which has plump cloves) on small to medium white bulbs with light purple streaking. It has broad, fibrous vertical leaves and produces multiple sets of bulbils on the stems. It's sweet flavor builds to a fiery and lingering crescendo. “Lasun” is the Nepali word for garlic. There is no data on where in [Nepal](#) this

variety is from. 2 lb. limit

Palestinian (W6 27692) small bulbs with 3-5 elongated cloves and multiple sets of bulbils. The plants are early to emerge and have dark, glossy, almost waxy vertical leaves. It has a quick bite that subsides leaving a rich, oily garlic aftertaste. From Khaled Hardan, in whose family it has been cultivated for over a century. Thousands of acres of Palestinian lands have been swallowed by Israeli settlement expansion and wall construction, as well as access to water cut off. Many rare (heirloom) plant varieties have been endangered or destroyed, as have those who've tended them. ¼ lb. limit

Single: this strange little cultivar from Chengu, China often gets lumped in with Asiatic strains but it spathe and umbels differ. The plants are short with thin leaves. In this location, many of the bulbs produce rounds rather than bulbs divided into cloves. The plants are early to mature and the flavor is bright and piquant. ¼ lb. limit

Sural (W6 26172) ⚔ from the southern Ural Mountains (thus the name), this has 5-6 squat, round tan cloves in white bulbs with purple blushing. Sural has a dark rich flavor that builds into a sharp heat that quickly fades. It's flowers have purple anthers, bulbils are easily removed and it has consistently produced true seed. 5 lb. limit

Syrian (W6 10472) has thin upright leaves that form a tight V and has a weak bolting tendency. Small bulbs with 15-20 tiny cloves around a central stem may make this a curiosity for the garlic enthusiast; however, grown at more southern latitudes it can size up well. This variety is representative of a distinct group of Middle Eastern garlics. ¼ lb. limit

Tai Cang grows tall, slender plants with very thin, vertical leaves. Bulbs are white with light purple streaking and 6-8 cloves. Of Chinese origin, Tai Cang has a crisp texture and fries up well. ½ lb limit

Ver Veist: This is an oddball variety that came from the Seed Savers Exchange collection but was erroneously labeled with a GRIN accession number that did not match it's counterpart, a Turkish Silverskin. Where it came from is a guessing game. "Ver veist" means "who knows?" in Yiddish. Garlic translates as "knobl". This garlic has 8-10 elongated cloves on medium heads. It has good flavor and matures very early, just after the Turbans. ½ lb. limit

TRUE SEED PROGENY It can take two seasons to go from seed to bulb and several years to propagate a bulb's worth of cloves into a planting large enough to list here. Thus, these offerings have been asexually propagated for several seasons since they germinated from true seed. Since this process began, we have produced dozens of new clones with interesting traits. In the seasons to come we will select the best of these and make them available as enough stock is grown out. True Seed Progeny are \$8 per ¼ lb; \$14 per ½ lb; \$20 per lb.

Navistar: ⚔ This is variety was grown out from the seeds given to me by Dr. Ivan Buddenhagen. While Ivan is renowned as one of the worlds foremost experts on bananas, in the late 90s, he took up experimenting with growing garlic to true seed. us. One day at farmer's market he gifted me with a bag of umbels which i passed along to my colleague Ted Meredith along with the comparatively paltry sum of seeds i had collected that year from my own meagre efforts. There was considerable diversity in the resultant varieties, this was the star of the material; "Navi" is Ivan backwards, thus the name. It appears Purple Stripe, having 8-12 elongated cloves with fine purple stripes though less vibrant blushing on the inner layers than other cultivars within this group. Excellent sharp flavor with a late hot bite. Tight bulbs with very good storage. 1 lb. limit

Ascraeus was named for the tallest and northernmost of the three volcanos comprising the [Tharsis Montes](#) on the red planet of Mars. It was the most vigorous and enormous of the first generation progeny of Krasnodar White. Unfortunately, in spite of it's sheer enormity (4 inch heads!) it was too unstable and prone to brooming to continue to propagate. My experience with this variety is worth noting for those of you endeavoring to produce true seed that such instabilities may take several seasons to become apparent. This can be surprisingly good or, in this case, disappointing. On the

other hand, what is exciting is Ascræus's own progeny: one appears to be a vigorous Porcelain and others have outcrossed into new unique strains which will be offered in 2017 when enough stock is produced.

Arsia: ☞ See description under Porcelain.

Pavonis: ☞ Of the four 1st generation progeny of Krasnodar White, this was the least vigorous but actually the most interesting. It clearly expresses outcrossing, possibly with a Marbled strain. The cloves are more squat than Porcelains and have a darker red hue. The plants are shorter with a lateral leaf architecture. The flavor isn't as sulfurous but it still packs a raw kick. It is named for the [Pavonis Mons](#), the smallest of the three Mars volcanos comprising the Tharsis Montes, its peak towering at nearly 46,000 feet above the Martian surface.

Tazatazat: See description under Porcelain.

Ozodlik (S13/14 Kish1): ☞ This is one of several progeny of Kishlyk. It features 8-12 squat light purple cloves enclosed by white wrappers with purple streaking. It has bright favor, medium heat with a late bite that lingers. It is easy to peel and thus moderate storage. Ozodlik means liberty in Uzbek and this garlic is dedicated to the defenders of human rights in one of the world's most repressive states. Members of the [Human Rights Alliance](#) of Uzbekistan, among others, have been subject to assaults, detention and worse. The work of brave and indefatigable activists like Elena Urlaeva who persevere, decrying modern slavery, corruption and mass murder in the face of dictatorship deserves attention and respect. 1 lb. limit

SHALLOTS

Allium cepa, *aggregatum* group aka *Allium ascalonicum*

The common onion, *A cepa*, is planted from seeds and grown out to a single bulb. Shallots are multiplying onions, but asexually propagated from a bulb. Fall planted, along with garlic, each shallot will *aggregate*, divide into a cluster. Like garlic, shallots are likely to have originated in Central Asia but were given their name by Greek merchant traders who discovered them in the ancient Palestinian port city of [Ashkelon](#), thus *A acsalonicum*. Though founded as far back as 2000 BCE, Ashkelon was much fought over and changed hands many times. The shallot was brought to Europe from the Middle East by returning crusaders and popularized by Charles the Great, aka Emperor [Charlemagne](#) in early 9th century CE. Though destroyed by Crusaders in the 13th century it was reestablished under the Ottomans a few hundred years later. Ashkelon was last conquered by Israel in 1948. By then, the shallot had spread and is now a feature of cuisines worldwide.

Milder in pungency than the common onion, shallots have a distinct flavor. Used raw in salads, cooked in sauces, ground into curries or caramelized as a condiment, they are a delight in the kitchen and easy to grow. Shallots with some acrid raw flavor tend to have more complex flavor when sautéed, while those that are mild and sweeter excel in salads and other raw preparations. While many shallots are similar in appearance, diversity is quite apparent in plant morphology. Shallots can be spring planted and this might reduce its bolting habit, though it may also compromise its yield as well. A percentage of shallots will bolt, particularly when stressed by cold. Scapes of bolting plants should be cut to direct the plants energy into bulbing. These are splendid and used like green onions. Shallot yields vary widely per variety and season. Large bulbs will produce a greater number of small shallots; small bulbs will produce fewer larger shallots. Shallots need a bit more space than does garlic. You can use the same row width giving them a few more inches between shallots bulbs or in raised beds on 9" centers. It is harvested when the tops have dried down and cure as you would garlic. **Shallots are \$14 per half pound, \$18 per pound, except French Grey which is 20/lb.**

French Grey or **Grey Griselle** is a distinct species, different from all other shallots; in fact, it's classified not as *A. cepa* but *A. oschaninii*. We have yet to find historical data on how it wound up in Southwestern Europe, much less when, but in France they are considered “true shallots” and highly sought after. It has thick, rough skin that is nearly impossible to clean (we don't bother) but the flesh has fine purple rings and its flavor is exquisite. Fresh from harvest it excels raw in salads but as it ages, pungency and acidity intensify and light sautéing brings out its outstanding flavor. French Grey will not yield as heavily as other shallots and it has shorter dormancy. It matures a little earlier and will not bolt.

Blossom (aka Pink Seed Blum): large salad shallot with tan skin, pink flesh and a mild sweet flavor when raw. Productive and long keeping.

French Winter Red: Squat shallots with dark copper skin on trifurcated bulbs. Cold hardy, they resist bolting and have excellent storage. These are well suited to sautéing, roasting and in curries.

Frog Leg: Plump like a frog's legs, very productive, and light copper skinned with reddish flesh. Though acrid when raw, sautéing brings out its complex flavor.

Golden: Dutch type, yellow skin on generally trifurcated bulbs with golden flesh, this is more pungent raw than other shallots with an upfront flavor that sweetens considerably when sautéed, thus well suited to caramelizing. Vigorous growers but when fall planted in cold climates these are prone to bolting, providing shallot scapes. Golden yields heavily and has far and away *the best storage* of all the varieties.

Long Bow Red: Another copper skinned shallot with light red flesh, these are much more elongated than other varieties. They have an impressive complex flavor when sautéed and have moderate storage.

Prince de Bretagne: large reddish-copper skinned French shallot with cream-pink flesh, mellow flavored with a mild bite and very faint acidity which makes it an ideal salad shallot. It is productive and stores fairly well.

OTHER PRODUCTS AVAILABLE from GARLICANA

Braids: decorative braids contain at least 12 heads and have dried flowers: statice, straw flower and/or gomphrena woven into them. They are variable in weight and come in three styles:

White papered Silverskin or Artichoke on the outer rows with purple Turban in the center.

All Silverskin or Artichoke. \$18/lb.

Marbled: these are deluxe braids containing large bulbed Marbled types. \$22/lb.

Garlic Powders: As only the largest cloves are selected for planting in the fall, smaller cloves are set aside. These are lumped into their respective categories, hand peeled, sliced into chips, dried at 115° F, then frozen and powdered. The flavors and aromas of different types of garlic are apparent even in dried form. These are kept frozen until shipped and it is recommended to store in a freezer to retain flavor and prevent caking. Powder can be requested by category, though availability of any given type is subject to change. Let us know if substitution is acceptable.

2 ¼ oz jars are \$10. If ordering powder jars with garlic or shallots, there is no extra shipping charge. Bulk price is \$50/lb.

Garlic Salt: Garlic is minced with Himalayan Pink or French Grey salt at a 3:1 ratio so as to let the garlic infuse into the salt. Then it's dried, ground and jarred. 2 ¼ oz jars are \$8. Bulk price is \$45/lb.

Roasted Garlic Powder: Roasted, dried and powdered. It's a bit more prone to cake than regular garlic powder but the flavor is phenomenal. 2 ¼ oz jars are \$15

Roasted Garlic Salt: the roasted, dried garlic is ground into coarser granules which cake less and blended with fine Himalayan Pink salt. 2 ¼ oz jars are \$10

Table Stock: these are garlies that are under 1 ¾", thus a bit too small for planting. These can be requested by category but *not* by specific variety. Availability depends on supply of small bulbs. Table stock is \$10 per pound.

GARLIC PRICES

Silverskins and Polish White Artichoke: \$12 per half pound, \$18 per pound

All other garlic varieties: \$14 per half pound, \$20 per pound

1/4 lb. samples for all varieties are \$8

Bulk Prices: varieties marked with * are available for bulk quantity discounts. 10-20 lbs. 10% off, 20-40 lbs. \$15% off.

Sample Packages:

A) 2 lbs. Includes ½ lb. each Artichoke, Silverskin, Purple Stripe, Porcelain. \$55

B) 2.5 lbs. Includes ¼ lb. each of all ten groups: Artichoke, Silverskin, Purple Stripe, Porcelain, Turban, Marbled, Glazed and Asiatic, Creole and Rocamboles \$85

C) 5 lbs. Same as above but ½ lb. each \$125

Note: late orders for sample packages may include substitutions of wild or unclassified varieties for anything that is otherwise sold out. You will get something well worth growing, rest assured.

SHIPPING

While orders are accepted anytime, shipping begins in mid-September. Unless you specifically request otherwise, we won't deposit checks until getting ready to ship your order.

Most orders are shipped in USPS priority flat rate boxes: a medium box will hold 4-5 lbs., a large will hold up to 7 lbs. of assorted varieties and up to 10 lbs. of a single variety.

For orders *under* 1 lb., minimum shipping is \$8

For orders between 1-4 ½ lbs, shipping price is \$14.

For orders between 5 lbs. And 8 lbs. shipping is \$19.

For orders over 8 lbs. please call or email to work out shipping rates.

Garlic powder has a minimum \$7 shipping cost *unless* ordered with garlic and/or shallots, then there's no extra charge.

If you live in the Pacific Northwest, please call for discounted shipping rates. (541) 825-3333

Payment is accepted in cash, check or money order only. Sorry, no credit card or paypal at this time.

Checks need to be made out to Garlicana.

GROWING INSTRUCTIONS

SOIL

Garlic, like many crops, likes rich, well drained, friable soil with plenty of organic matter and a pH between 6 and 7. Soil content can greatly affect garlic; for example, sulfur rich soil will produce more pungent garlic, while iron levels will influence coloration. Work beds deeply and incorporate compost or aged manure. It is necessary to rotate garlic and all other alliums at a *minimum* of a three year basis so as to prevent disease and build healthy soil.

PLANTING

Garlic is best planted in the fall, a month or so before the ground freezes. In the north, this is usually in October. In milder climates later planting is possible. Here, garlic is planted in November. Carefully break bulbs into individual cloves within a few days of planting as this signals the beginning of growth. Be careful not to break the root base, called the “basal plate” when separating cloves. Damaged cloves are susceptible to infection and rot. Select the largest cloves for planting as these will yield the largest heads. When importing new allium plant material into your soil, a minor precaution against pests and fungi is to soak cloves in isopropyl alcohol (regular strength is sufficient) for 10 minutes and let completely dry out before planting, or alternatively soak for 10 minutes in a 10% bleach solution with a drop or two of dish soap (as a surfactant), then dunk/soak in hot, 110° F water to rinse, just prior to planting. Plant cloves basal plate downwards, tips up. An inch deep planting is sufficient for most areas, but where winters are severe, planting up to 3” is recommended. Spacing varies with every grower. Factors contributing towards yield include soil fertility, competition for light, and ease of cultivation. For raised beds with two foot depth, garlic can be planted on 6” centers. For row planting, garlic spaced 5-8” apart in rows 8-10” apart, is adequate. It is helpful to cluster varieties that you expect to harvest around the same time.

MULCH

Garlic does not handle competition from weeds. For a good harvest it is crucial to stay ahead on weeding. Mulch is useful for suppressing weed growth, though it often contains weed seed itself. It also helps regulate fluctuations in soil temperature, preventing evaporation and soil compaction from rain and heaving from freezing. On the other hand, mulch can slow down the warming of the soil in the spring. We have encountered cool damp spells near harvest time and found it necessary to remove the mulch to aid in drying the soil. Mulch material is varied; we have heard of successful use of shredded leaves, lawn grass clippings, as well as plastic. We put 4-6 inches of clean straw or spoiled alfalfa down immediately after planting. While most shoots will punch through the mulch, a few plants will inevitably need assistance.

SPRING FERTILIZATION

Many growers fertilize with nitrogen after spring emergence to promote healthy leaf growth. Some side dress with composted manures or alfalfa meal, others water in fertilizers. Foliar feeding with a combo of wettable fish and seaweed concentrates is another option. While garlic's waxy leaves limit absorption of foliar fertilizers, using a surfactant, a drop or so of dish soap per gallon, will decrease the surface tension of the water, thus increase its ability to spread, wet and penetrate the leaves. It is best to foliar feed early in the morning or evening to maximize absorption time. As the days lengthen and get hot, leaf growth slows and stops. At this point, fertilization will not increase plant growth as it is transitioning into a bulb, trying to reproduce before going into dormancy.

WATER

Water in the spring as with any leafy garden vegetable. Adequate moisture is important during bulb development; water and soil fertility are major determining factors in bulb size. Garlic enjoys soil that is moist but not sodden. Green leaves correspond with living bulb wrappers and the dead bottom leaves correspond with dead bulb wrappers. Moisture on this necrotic tissue can cause infection so good drainage is beneficial in this regard. Reduce and cut off water a week prior to harvest. As garlic varieties mature at different times, positioning of garlic types in respect to irrigation is best determined at planting time. If the soil is too wet as harvest approaches, removal of mulch may be necessary, albeit tedious.

SCAPE REMOVAL

Hardneck garlics send up flower stems known as scapes. Removal of the scapes redirects the plant's energy from trying (and failing) to reproduce sexually, into bulb formation and success in clonal reproduction. Growers differ on when it's best to remove them. Some snip them shortly after emergence, others recommend waiting until after they uncoil, citing evidence of increased storage capacity when cut at this stage. We harvest when they are large enough to be optimal as a vegetable, usually when the scapes are in coil, but before they get tough and fibrous. Snip the scape just above the top leaf on a dry sunny day. Yum.

HARVEST

Garlic is generally harvested in the summer. In the north, this can be as late as August and the harvest window will be narrower. Here in SW Oregon, harvest generally begins at the end of May for very early varieties and continues to mid July for late ones. Cold springs make for later harvests. The lower leaves will begin to dry down as the plant nears maturity. We generally harvest when there are 4-6 semi-green leaves remaining on any given variety; however, this is only a guideline. Pulling a few plants and checking them out to see if the cloves are well formed with good wrappers is best before committing to a major harvest. Pop the plants up in the soil using a fork or spade, being careful not to cut or bruise the bulbs and brush off soil from around the roots. Exposure to direct sunlight for more than a few minutes may scald the cloves. Covering harvested plants with a sheet can help and prompt removal of plants to a curing shed is beneficial. Occasionally we will harvest a plant with the scape still intact or even just emerging. If left on, these will take longer to cure and the scapes will continue to develop, diverting energy from the bulb.

CURING

Garlic can be cured in a shed, garage or any well ventilated space out of direct sunlight. Hang plants in bundles of ten or more depending on size; alternatively, lay out on racks or screens in a single layer. Air circulation between bulbs is very important. As the bulbs cure garlic will lose as much as 20% of its weight to evaporation and that moisture needs a place to go. Curing can take from three to six weeks. Multi-layered softnecks take longer than the single layered hardnecks. Curing enables good storage and concentrates the garlic's flavor. After curing, cut tops and roots half an inch above and below the bulb and gently brush or rub off dirt. It's worth noting that most garlic will store better if the tops are left on as moisture will transpire through the neck.

STORAGE

Stored garlic needs good air circulation. After cleaning store in mesh sacks, braids or bundles. Most varieties do well with around 60% humidity. Softnecks are generally more tolerant of varying humidity levels. Hardnecks are fussier. Rocambole, Glazed and Marbled garlics tend to dehydrate at low humidity levels. Purple Stripes and many other hardnecks will swell on the root nodules when the humidity gets over 70%. Temperatures between around 50 and 60 degrees are optimal. Consistent temperature and humidity levels also facilitate longer storage.

DISEASES and PESTS

In spite of its medicinal qualities such as being anti-microbial, anti-biotic, anti-fungal, etc, while growing, garlic is acutally susceptible to a number pests and diseases. We carefully inspect garlic that is sent out for quality but like most growers we have experienced various problems and take various preventative measures as described above. One common pest is the bulb mite. These little buggers affect garlic in storage, nibbling away at the film between the clove and peel, accelerating desiccation, leaving bulbs open for other diseases when planted. We have started dusting my own planting stock with Diatomaceous Earth (DE) to prevent mites from moving from one bulb to the next in the storage trays and noticed some improvement, particularly in the Glazed garlics. If you encounter problems, the best way to diagnose is to send a sample to a lab; however there are a few web sites which are very helpful in disease and pest diagnostics:

Oregon State University: <http://plant-clinic.bpp.oregonstate.edu/garlic>

UC Davis: <http://www.ipm.ucdavis.edu/PMG/selectnewpest.onion-and-garlic.html>

Cornell: <http://plantclinic.cornell.edu/factsheets/garlicdiseases.pdf>

For those farming garlic or onions, the book *The Compendium of Onion and Garlic Diseases and Pests* is a valuable resource for diagnosis and analysis of problems.

