

## Tropical Seeds

General Tropical plant cultivation information: The most common problems are keeping the seeds too wet and using incorrect soil. The soil must be well-draining. Never use vermiculite as it holds water. Use sand in the soil mixture. When seeds are kept too wet you 'rot the baby'. Fresh air is important. Most tropical plants like bright light and warmth. Watch for mold and bacteria. You can use dry sand or cigarette ash on mold. Very hard coated seeds can take time to germinate. Very soft seeds are more likely to rot. In general, err on the side of making the soil too dry rather than too wet.

## Tropical Seeds

Common Name	Agati
Botanical Name	<i>Sesbania grandiflora</i>
Climate	Tropical
Planting Instructions	Sow in June and July, putting 3–4 seeds per hole in a narrow channel directly into garden. Soak seeds in just boiled water overnight and scarify (rub small seeds between sandpaper; for large seeds, clip, cut or file off a small part of the seed coat without damaging the inside of the seed) the unswollen seeds. Or scarify all seeds and soak overnight. Tolerates heavy soils and poor soils. Will grow shorter and provide a shaded canopy if planted together or will grow to full height if allowed 15 feet of distance. Grows well with coconut plants and provides shade for them.
Light	Full sun
Water	Tolerates drought and water logged soils.
Germination Rate	1-4 weeks. 50%-75% of seeds typically germinate
Days to Maturity	Do not know by this name
Special Instructions	Cut the plant when it is approximately 3 feet tall. After the plant is harvested, shoots resprout with such vigor that they seem irrepressible.
Part of Plant used	Pods, seeds, bark, leaves, gums, and flowers
Spiritual Needs	
Medicinal Uses	The astringent bark was used in treating smallpox, diarrhea, dysentery, scabies, mouth and gastrointestinal ulcers, paludism (from mosquitoes) and other eruptive fevers. The juice from the flowers is used to treat headache, head congestion or stuffy nose. As a snuff, the juice is supposed to clear the nasal sinuses. Leaves are poulticed onto bruises and rheumatic swellings and are chewed to disinfect the mouth and throat. The fruits are laxative and are indicated for constipation, anemia, bronchitis, fever, pain, thirst, and tumors; the flowers increase appetite and are cooling. The flowers are indicated for worms, fungus, epilepsy, itch, leprosy, bronchitis, gout, night blindness, atrophy of the nose, and fever occurring every 4th day; the root is used for inflammation, indicated for rheumatism.
Description	Has enormous white or red flowers, to 4" long. This tree grows to 40 feet. It is fast growing. Pods reach the length of 2 feet.
Other	The pods are excellent forage (edible), used as green manure, to fix nitrogen into the soil and to provide a high amount of vitamins, minerals and protein.
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Allspice
Botanical Name	Pimenta dioica
Climate	Tropical
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	Unripe green berries
Spiritual Needs	Masculine - spiritually used to promote spiritual healing - cultivates intuitive awareness
Medicinal Uses	Used for pain relief such as in toothaches, muscle and joint pain and as a digestive aid. It is also indicated for colds, menstrual cramps, upset stomach, indigestion, flatulence and diabetes. Promotes digestion.
Description	This tree grows to 40 feet, has large leathery oblong leaves and produces clusters of 1/2 inch reddish-greenish brown berries the size of a pea from small white flowers.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Anil del Muerto
Botanical Name	Verbesina encelioides
Climate	Subtropic/Tropical
Planting Instructions	sow directly in the garden or in pots early in the spring or summer. Prefers a small amount of space
Light	Full sun
Water	Average to low water
Germination Rate	6 days
Days to Maturity	
Special Instructions	
Part of Plant used	
Spiritual Needs	The Navajo chewed the petals to bring good luck while hunting and placed the flowers on their homes and in their hair to ward off lightning - masculine
Medicinal Uses	Used as an anti-inflammatory, digestive aid, tones the kidneys, reduces water retention, is beneficial for the male reproductive system and is used to treat skin diseases and spider bites.
Description	Many, striking yellow mini sunflowers with gray green leaves. It is an upright to sprawling annual that reaches a height of one to four feet. The leaves are coarsely toothed and measure two to four inches in length. The yellow flower head consists of numerous disk flowers and approximately 12 ray flowers
Other	
Purchased From	Horizon

### Tropical Seeds

Common Name	Anise
Botanical Name	Pimpinella anisum
Climate	Tropical/Subtropic
Planting Instructions	Easily grown from seed. Sow directly into garden in early spring 1/8 of an inch deep in warm soil as tap root makes transplanting difficult. Prefer a moderate amount of space. Grows well in poor or sandy soil. Keep weeds away and keep sheltered from the wind. Prefers a slightly acidic (compost-rich) soil.
Light	Full sun
Water	Plenty of water during germination and growth cycles. Well drained soil. Grows well in dry soil.
Germination Rate	1-4 days. 75%-100% of seeds typically germinate
Days to Maturity	Will flower in late summer to early fall
Special Instructions	Harvest seeds by cutting whole seed heads after they have ripened but before they have broken open. Red dry fruit should be gathered between July and September.
Part of Plant used	seed
Spiritual Needs	Masculine, energies of purification and usefulness. Anise preserves useful childlike qualities and is used for dreams. Anise is a good companion in the Astral Realm. It combines well with Amber. In certain circumstances, Anise is used for cleansing spiritual baths. Star Anise is used for intuitive work. Anise also brings loving spirits for protection in gardens.
Medicinal Uses	Anise is used for colic, gas, indigestion, diarrhea in infants. It is also used to loosen phlegm from the lungs for expectoration, for coughs, bronchitis and asthma. Anise also promotes milk flow in nursing mothers, tones the kidneys and has a mild estrogenic action. May also induce the regeneration of liver cells. It is used as a treatment for water retention, headache, insomnia, nausea, lice, cholera, bacterial infections and growths. Affects the lungs, spleen and liver.
Description	The leaves are finely divides, long and slender, the flowers are yellow and the plant reaches a height of 3-6 feet.
Other	good source of iron
Purchased From	Banana Tree

Tropical Seeds

Common Name	Barbados nut
Botanical Name	<i>Jatropha curcas</i>
Climate	
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	Leaf, root, seed, latex
Spiritual Needs	masculine - spiritually used for protection and healing to the first and second chakras
Medicinal Uses	<p>Has been used for growths, pain, wounds, worms, burns, carbuncles, convulsions, cough, dermatitis, diarrhea, dropsy, dysentery, indigestion, eczema, erysipelas, fever, gonorrhea, hernia, incontinence, inflammation, jaundice, nerve pain, paralysis, labor, pleurisy, pneumonia, rash, rheumatism, scabies, sciatica, sores, stomachache, syphilis, tetanus, thrush, tumors, ulcers, uterine disorders, whitlows (abscess on a finger), yellow fever and the kidneys. It is an antiseptic, stops bleeding, reduces water retention, induces vomiting, relieves pain (narcotic). It aids in healing wounds, opens up pathways of elimination, increases milk flow, purges the digestive tract, brings blood to the surface of the skin, reduces accumulation of fluid in connective tissue and pleural membranes. Latex can be applied topically to bee and wasp stings, burns, hemorrhoids, ringworm, ulcers inflamed tongues and toothaches.</p> <p>The leaf decoction is used topically for arthritis, scabies. The heated leaves placed on the breast induce milk flow. The leaves increase blood flow to the surface of the skin for paralysis and rheumatism; also applied to hard tumors. Leaves are used internally for venereal disease, heartburn, parasites. The root decoction is used for dysentery internally and as a mouthwash for bleeding gums and toothache. Seeds are used also for dropsy, gout, paralysis, lack of appetite and skin ailments. The seed oil induces vomiting, bowel movements, purges the digestive tract and is used for skin ailments. Homeopathically used for cold sweats, colic, collapse, cramps, cyanosis (blue skin due to lack of oxygen), diarrhea, leg cramps.</p>
Description	Shrub or tree to 18 feet, with spreading branches and stubby twigs, with a milky or yellowish latex sap. Leaves fall in the autumn, are oval, heart shaped leaves. Flowers are green-yellow, bell-shaped male and female. Fruit is a capsule that splits into 3 valves, all or two of which commonly have an oblong black seed.

Tropical Seeds

	Barbados nut continued
Other	This herb must be used with caution as it may be harmful if used inappropriately. The poisoning is irritant, with acute abdominal pain and nausea about 1/2 hour following ingestion. Diarrhea and nausea continue but are not usually serious. Depression and collapse (fainting) may occur, especially in children. Two seeds are strong purgative. Four to five seeds are said to have caused death due to toxin 'curcin', but the roasted seed is said to be nearly harmless Bark, fruit, leaf, root and wood are all reported to contain cyanide.
Purchased From	Banana Tree

### Tropical Seeds

Common Name	Bay Leaf, Bay Tree also known as Noble Laurel
Botanical Name	Laurus nobilis
Climate	Subtropic
Planting Instructions	Moderately compost-rich soil. Sow seeds in warm soil. Not cold hardy. Grow in gallon pots and transplant outdoors.
Light	Full sun/Partial shade
Water	Well drained soil. Prefers damp soil
Germination Rate	4 weeks.
Days to Maturity	
Special Instructions	Bay leaves may be harvested throughout the year. Pick early in the day. Take cuttings from fresh green shoots in the fall for further planting. These will take 6 to 9 months to take root.
Part of Plant used	leaf, essential oil, berries
Spiritual Needs	Masculine - protection and aids in dreams and visions - purification - strength and wisdom in healing
Medicinal Uses	Bay leaf is used to soothe the stomach, increase digestion (particularly protein digestion), decrease gas, arthritis, for headaches, urinary problems, growths, worms, insect bites and stings, skin wounds, sprains, bruises and skin rashes. Bay laurel promotes menses and labor, induces perspiration, reduces water retention, induces vomiting and tones the nervous system and kidneys. It is used as a narcotic, an astringent, antifungal and antibacterial remedy. Low doses of bay oil have been found to have a sedative effect, higher doses induce stupor. The leaf reduces blood pressure mildly. The leaves and berries can be used for rheumatism, skin rashes, and earaches.
Description	Bay is an aromatic evergreen shrub or tree growing to 70 feet. It has leathery dark green leaves, small yellow male and female flowers and shiny black berries.
Other	Bay repels cockroaches in the house.
Purchased From	Banana Tree

### Tropical Seeds

Common Name	Bishops flower, Bishops weed
Botanical Name	Ammi majus
Climate	Tropical/Subtropic
Planting Instructions	Sow directly into garden in the spring - do not transplant. Prefers a moderate amount of space between plants.
Light	Partial shade
Water	Moderate water
Germination Rate	1-2 weeks. 75%-100% of seeds will typically germinate.
Days to Maturity	Will be established by fall
Special Instructions	Harvest the seeds in late summer
Part of Plant used	Seeds
Spiritual Needs	Do not know by this name
Medicinal Uses	Bishop's flower seed calms the digestive system, decreases water retention, is used to treat asthma and angina, psoriasis and vitiligo, where skin loses its pigmentation. The seeds, in an infusion or as a tincture, calm the digestive system. They also relieve water retention and treat asthma and angina. It has also been used for psoriasis.
Description	This is a straight, annual herb that grows to almost 3 feet with tangled leaflets and umbrella-shaped clusters of small white flowers.
Other	May cause nausea, vomiting and headache as well as allergic reactions to sunlight.
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Caltrop. Tribulus Terrestris
Botanical Name	Pedaliium murex
Climate	
Planting Instructions	Be careful when opening seed packet - seed has extremely sharp points.
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	seed, flower, stems and fruits
Spiritual Needs	Do not know by this name
Medicinal Uses	<p>The seed can induce labor, improves digestion and elimination, expels worms, is an astringent, soothes mucous membranes, reduces water retention, induces menses, increases milk flow and tones the system. It stimulates blood circulation as well. A decoction of the seed is used in treating impotency in males, gonorrhoea and incontinence of urine. It has also proved effective in treating painful urination, gout and kidney diseases. The flowers are used in the treatment of leprosy.</p> <p>The stems are used in the treatment of scabious (with itchy eruptions) skin diseases and psoriasis.</p> <p>The dried and concocted fruits are used in the treatment of congestion, gas, headache, liver, inflammation of the eyes and mouth ulcers.</p>
Description	Shrubby, stiff stemmed herb. The seed is four-angled and has 5 extremely sharp spines.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Cancer Bush
Botanical Name	<i>Sutherlandia frutescens</i>
Climate	Tropical
Planting Instructions	Grow for 1 year in gallon pots before transplanting. Prefers a lot of space.
Light	full sun
Water	Dryish soils
Germination Rate	Scarify seeds (rub small seeds between sandpaper; for large seeds, clip, cut or file off a small part of the seed coat without damaging the inside of the seed) and fire treat before sowing . To fire treat, plant seed about 1/4 inch deep in a soil block of sandy, moist soil. Wet down the sides of the flat so they do not burn. Place a pile of dried kindling (dry pine needles and cones work best) right on top of the soil and light until it is all burned. Seedlings will emerge within a week or two.
Days to Maturity	
Special Instructions	
Part of Plant used	
Spiritual Needs	Do not know by this name
Medicinal Uses	Used as a bitter tonic for the digestive system to increase digestion, relieve constipation.
Description	Perennial woody shrub with deeply divided, gray-green leaves and large, showy bright scarlet flowers and inflated seedpods.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Candlebush, King of the Forest
Botanical Name	Cassia alata
Climate	Tropical/Subtropical/Temperate
Planting Instructions	Prefers sandy soil
Light	Full sun
Water	
Germination Rate	1-2 weeks. Scarify (rub small seeds between sandpaper; for large seeds, clip, cut or file off a small part of the seed coat without damaging the inside of the seed) and soak. Very long lived seeds (up to 158 years). 75%-100%
Days to Maturity	
Special Instructions	
Part of Plant used	leaf and flowers
Spiritual Needs	Do not know by this name
Medicinal Uses	The leaf is used for skin ailments, for pain relief, fevers, diarrhea, constipation, rheumatism and both flower and leaf preparations are antibacterial, anti parasitic, anti-inflammatory and are used to reduce allergic reaction, asthma, for herpes, sore throats, joint pain, for snake bites and to purge the intestines.
Description	Ill-smelling shrub, reaching 12-16 feet in height. Its leaves are large and divided into 14-16 pairs of oval lance-shaped leaflets without a stalk, yellow flowers and black fruit.
Other	Used for tattooing . Good for fixing nitrogen into the soil as it is part of the legume family.
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Cardamom
Botanical Name	Elattaria cardamom
Climate	Tropical
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	seeds
Spiritual Needs	Have not used this spiritually
Medicinal Uses	Cardamom is used to ease stomach pain, reduce gas, to stimulate the digestive system and to relieve muscle spasms. It is also used for asthma, bronchitis, kidney stones, lack of appetite, weakness and for urinary incontinence.
Description	Perennial with tall, simple canes or stems that grow out of a thick rhizome (root) growing to 15 feet with mauve-marked white flowers and very long, dark green, lance-shaped leaves. Seedpods contain many seeds.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Carob
Botanical Name	<i>Ceratonia siliqua</i>
Climate	Temperate/Subtropic
Planting Instructions	Pre-soak for 24 hours in warm water prior to sowing. If the seed has not swollen then give it another soaking in warm water until it does swell up. Or scarify (rub small seeds between sandpaper; for large seeds, clip, cut or file off a small part of the seed coat without damaging the inside of the seed). May be kept in pots and brought indoors for the winter. Does not withstand frost. Does well in gravelly or rocky soils. Tolerates alkaline (limestone, dolomite, wood ash, egg shells) soils. Can also grow in sandy and compost-rich soils and nutritionally poor soil.
Light	full sun
Water	Well drained soil. Drought-resistant
Germination Rate	2 months
Days to Maturity	
Special Instructions	
Part of Plant used	pulp, bark, seed pods
Spiritual Needs	Not used spiritually
Medicinal Uses	The pulp in the pods is mildly laxative; however, it is astringent and is used to treat diarrhea and to gently help cleanse and relieve irritation within the gut. The seed pods are also used in the treatment of coughs and mouth ulcers. The seed husks are astringent and purgative.
Description	An evergreen tree growing to 45 feet
Other	
Purchased From	Horizon

### Tropical Seeds

Common Name	Castor Bean
Botanical Name	<i>Ricinus cummunis carmencita</i>
Climate	
Planting Instructions	Grows well in any soil. Soak seeds overnight and plant in pots. Plant out in May. Side dress with compost or plant in compost piles, 5 seeds together and let all of them grow.
Light	Full sun and heat
Water	Well drained soil
Germination Rate	1-12 weeks
Days to Maturity	
Special Instructions	
Part of Plant used	oil from seeds and leaves
Spiritual Needs	Do not know by this name
Medicinal Uses	The oil has a laxative and purgative effect on the digestive system. The oil and the leaves are used externally for burns, rheumatism, lymph glands, tooth and ear ache. Internally, the oil is used for lung affections, shock and worms. The leaves can be used externally for burns, to stimulate milk flow (placed over the breasts), for bruises, to bring on menses, for fever, diabetes, tonsillitis.
Description	Shrub that grows 6-9 feet tall, alternate leaves, hairy, with long stalk and palm-shaped with many lobes. The flowers are yellow, male and female. Male flowers are at the base and female plants are on top of the plant. The fruit is often thorny, ovoid with smooth shiny red seed capsule.
Other	Use with extreme caution. Seeds are extremely toxic and possibly fatal if consumed. The oils extracted does not have this toxic property.
Purchased From	J.L. Hudson

### Tropical Seeds

Common Name	Cayenne Pepper, Jamaican Pepper
Botanical Name	Capsicum frutescens
Climate	Tropical
Planting Instructions	Start in the greenhouse 4-50 days prior to the last frost. When seedlings emerge, protect them from freezing and thin to 2 inches apart in the soil block. Transplant into garden after soil is very warm. Amend with colloidal rock phosphate or kelp.
Light	Full sun and long, hot summers
Water	Prefer scant, even water supply and good drainage
Germination Rate	Seeds are short lived.
Days to Maturity	
Special Instructions	
Part of Plant used	fruit
Spiritual Needs	Do not know by this name
Medicinal Uses	Cayenne is astringent, antispasmodic and used for the digestion. Cayenne is indicated for marked depression and weakness with feeble pulse, pale mucous membranes with scanty, thick secretions, congestive chill (chill with congestion of the lungs) and colic with abdominal bloating. It increases circulation, dilates capillaries, stimulates the nerves, is used for pain, induces perspiration, decongests the lungs and stimulates the digestive system. Externally and internally it can be used on bleeding wounds to stop bleeding and pain and to bring warmth to extremities. Use as a tonic benefits the heart and circulation, preventing heart attack, strokes, colds, flu, diminished vitality, headaches, indigestion, depression and arthritis.
	Combined with plantain in a poultice it draws out objects embedded in the flesh. Using small doses and gradually increasing dosage, it will heal stomach ulcers. Cayenne pepper stimulates the circulation, improves blood flow to the hands and feet and to the central organs. Internally, it is taken to relieve gas and colic, to stimulate the secretion of saliva, digestive juices, helps prevent infection in the digestive tract, increases the appetite. As a gargle, it is excellent for sore throats. Externally, it is mildly analgesic, increases blood flow to the affected part, and can be placed in socks or mittens to keep extremities warm. It is indicated to use externally for rheumatism, arthritis, or pericarditis.
Description	A perennial, spiky shrub growing to 3 feet with scarlet-red conical fruits filled with white seeds. The leaves are ovate to lance-shaped, entire. The flowers are white to yellow, growing alone, in pairs or threes.
Other	Caution: prolonged application on the skin can be irritating and can raise blisters. Excessive consumption can irritate the intestines and damage the kidneys.
Purchased From	Horizon

### Tropical Seeds

Common Name	Chaparral
Botanical Name	Larrea tridentata
Climate	Subtropic
Planting Instructions	Sow in soil blocks or in sandy soil. Prefers a lot of space.
Light	
Water	water seeds once a day until germination. Prefers well drained soil.
Germination Rate	Germinates readily in 1-6 weeks. 75%-100% of seeds will typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	leaf
Spiritual Needs	Female: used spiritually only by those with great wisdom (Elders) to see and work with the Spirits of Collective Consciousness.
Medicinal Uses	Indicated for upper respiratory infections, other infections, growths, arthritis and skin lesions. It also reduces allergic reactions and is anti-inflammatory. It expels excess fluids, and is an expectorant herb. It has been found to increase ascorbic acid levels in the adrenals, which improves adrenal function. It is indicated for rheumatic diseases, venereal infections, urinary infections, growths, acne, eczema, sores, wounds and rashes.
Description	Dark green stems and leaves, 4-8 feet tall. Leaves are opposite and divided into two leaflets. Flowers are bright yellow, with 5 petals. The fruit is rounded and covered with white hairs.
Other	Use with care. May cause inflammation of the liver in large dosages.
Purchased From	Horizon

Tropical Seeds

Common Name	Cumin, Comino
Botanical Name	Cuminum cyminum
Climate	Tropical
Planting Instructions	Sow directly into garden where they are to grow, in April or May after danger of frost has passed.
Light	
Water	
Germination Rate	1-2 weeks. Seed viable for 3 years. 75%-100% of seeds will typically germinate.
Days to Maturity	3 months
Special Instructions	
Part of Plant used	seeds
Spiritual Needs	Do not know by this name
Medicinal Uses	Relieves gas and bloating, stimulates the entire digestive process and is also used for insomnia, colds, fevers and to improve breast milk-production, for coughs, asthma and to treat rotten teeth. The tea can be used topically for painful bruises and injuries.
Description	Small annual growing to 1 foot. Has long narrow segmented leaves, clusters of pink or white flowers and small oblong ridged fruits.
Other	
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Custard Apple
Botanical Name	<i>Annona reticulata</i>
Climate	Tropical
Planting Instructions	
Light	
Water	
Germination Rate	4-6 weeks. Seeds viable for several years in dry storage.
Days to Maturity	
Special Instructions	
Part of Plant used	bark, seeds
Spiritual Needs	Do not know by this name
Medicinal Uses	The bark is pounded and boiled with salt and applied as a poultice to strains, sprains and bone fractures, reduces pain and healing time. Seeds of the fruits are pounded, powdered and used to kill head lice and fungal infection.
Description	Tree growing to 40 feet with large heart shaped fruits.
Other	Grown by Ms. Saqui, the bark is peeled and used as tying wire or string.
Purchased From	Banana Tree

Tropical Seeds

Common Name	Dagga, Wild; Dagga, Wild Leonurus
Botanical Name	Leonotis leonorus
Climate	Tropical
Planting Instructions	Start seeds early in compost rich soil. Prefers a moderate amount of space between plants.
Light	Full sun
Water	Regular waterings.
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	Stems, flowers, leaves, roots
Spiritual Needs	Do not know by this name
Medicinal Uses	Dagga is used to treat headaches, bronchitis, high blood pressure and colds, influenza, chest infections, asthma, viral hepatitis, diabetes, eczema, epilepsy, delayed menstruation, intestinal worms, fungal infections, constipation, spider bites and scorpion stings and as an antidote for snakebite. Externally used for the relief of hemorrhoids, eczema, skin rashes, muscular cramps and boils. Use 1 tablespoonful of chipped dried herb added to 3 cupfuls of boiling water, boil for 10 minutes, allow to cool overnight, strain and use clear liquid for both internal and external use. If fresh material is used, 3-4 young twigs (leaf and stem) are boiled with one quart of water. Dosage: (internal use) Adults: Half a cupful, Elderly and children 6-12 yrs : Quarter of a cupful, Children 2-6 yrs : Two teaspoonfuls .To be taken two to three times daily. For external use, the decoction may be applied to the affected area using a clean cloth.
Description	Shrub 6-15 feet tall, branching from a thick woody base; stem pale brown and very hairy; leaves are simple, rough, with pointy tips and bases, saw toothed half way up the leaf, bright green on top and hairy below. Flower is a bright orange tube-like flower covered with orange hairs. The fruit is a small nutlet.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Devil's Claw, South African - also known as Devils Bit
Botanical Name	Harpagophytum procumbens
Climate	Tropical
Planting Instructions	Sow in sandy, warm soil. Plant prefers a lot of space.
Light	Full sun
Water	Water several weeks after seed has been planted then allow soil to dry out. Prefers deeply drained soil. Adult plant requires very little water.
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	tuber
Spiritual Needs	Masculine: to remove unwanted spirits - protection - love
Medicinal Uses	Devil's Claw is used for digestive disorders, arthritis, lower back pain, rheumatic pains, nerve pain, headaches, fever, sores, ulcers, boils and diabetes. It relieves pain, reduces inflammation and increases digestive, liver, gallbladder and pancreas function.
Description	Trailing perennial reaching 5 feet in length, fleshy, lobed leaves and barbed woody fruit.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Drumstick Garlic
Botanical Name	Allium sphaerocephalum
Climate	Tropical/Subtropical/Temperate
Planting Instructions	
Light	
Water	Dry, well drained soil
Germination Rate	50%-75% of seeds will typically germinate.
Days to Maturity	
Special Instructions	
Part of Plant used	
Spiritual Needs	Masculine: energies of protection against fearful manifestations, healing, purification and courage. Garlic carries sexual energy. It is the Crone aspect of the Mother.
Medicinal Uses	Drumstick Garlic tones the digestion, the circulatory system, reduces blood cholesterol.
Description	Round 1 inch heads of reddish to white flowers on stems that grow to 3 feet.
Other	
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Myrobalan, Emblic
Botanical Name	<i>Embica officinalis</i>
Climate	Tropical
Planting Instructions	Sow in the greenhouse or outdoors in the spring or early summer and keep warm. In tropical areas, grow out seedlings in gallon pots for a year before transplanting.
Light	
Water	Keep seed moist after planting.
Germination Rate	Soak seed overnight.
Days to Maturity	
Special Instructions	
Part of Plant used	fruit
Spiritual Needs	Do not know by this name
Medicinal Uses	Used for asthma, bronchitis, hemorrhoids, gonorrhea, constipation, dysentery, anemia, jaundice, diabetes, diarrhea, joint pain and eye problems. It is an astringent, antibacterial, restores organs, strengthens the pancreas.
Description	Tree with feathery leaves, pale green flowers and round pale yellow or green fruit, loses leaves in the fall.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Epazote
Botanical Name	Chenopodium ambrosioides
Climate	Tropical/Subtropical/Temperate
Planting Instructions	Sow seed early summer in very sandy soil. Prefers poor, sandy and rocky soils. Give plants a lot of space. Press seed into the surface of the soil.
Light	Full sun.
Water	
Germination Rate	Light and heat dependent germinator.
Days to Maturity	
Special Instructions	
Part of Plant used	leaves, flowers, stalk, essential oil
Spiritual Needs	Do not know by this name
Medicinal Uses	The essential oil is anti-worm, antibacterial and antifungal and can be applied for skin ulcers (topically). Internally, the leaf can be taken for worms, amebae, to aid digestion, for asthma, fever, dysentery, diabetes, rheumatism (fresh root), to induce menses, after childbirth, as a heart tonic, for malaria, toothaches (mashed roots). Topically, it can be applied for skin parasites and for the inflammation of the eye (as a wash).
Description	Strong smelling plant, whitish leaves, lance-shaped with wavy edges. Leaves become smaller towards the top. Flowers are in a dense group, green and have separate male and female flowers. The fruit is a small smooth dry seed, similar to lamb's quarters.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Eucalyptus, Tasmanian Blue gum
Botanical Name	Eucalyptus globulus
Climate	Tropical
Planting Instructions	Grown very easily from seed. Sow in early spring or pre-chill seed in moist medium for 30 days prior to sowing directly into the garden shallowly in a warm place. Grow out for a year in gallon pots before transplanting. Hardy to -20 F.
Light	
Water	
Germination Rate	14 days. Variable germination percentage.
Days to Maturity	Very fast grower.
Special Instructions	
Part of Plant used	leaves, essential oil
Spiritual Needs	Feminine: cleansing - protection - healing fourth and fifth chakras
Medicinal Uses	Eucalyptus is used for colds, flu, to loosen phlegm from the lungs, decreases muscle spasms, is antiseptic for the respiratory system and used for fever, diabetes, asthma, sore throats, bronchitis and rheumatism. It has also been used for worms, malaria, sinusitis, cystitis and in large doses it is used to stop bleeding. Has an anesthetic effect on joints and sore muscles and has antibacterial properties. Externally, the oil can be used on wounds with pus and ulcers.
Description	This tree is aromatic with whitish bark that peels off. The leaves are simple, whole, blue-green, long and covered with a viscous resin-like substance. The flowers have a hard capsule that contain many stamen, the fruits a small capsule that contains many seeds.
Other	Oil should be used infrequently, as it is difficult to eliminate through the kidneys.
Purchased From	J.L. Hudson

### Tropical Seeds

Common Name	Fennel, finocchio
Botanical Name	Foeniculum vulgare
Climate	Tropical/Subtropical/Temperate
Planting Instructions	Plant seed directly into garden in the spring and thin to a generous spacing.
Light	
Water	
Germination Rate	Light dependent germinator.
Days to Maturity	Will be established by winter
Special Instructions	
Part of Plant used	seed, root
Spiritual Needs	Masculine: energies of healing and strength in adversity, facing fears and purification on a deep level.
Medicinal Uses	Fennel is used to relieve gas, increase digestion, to induce and to increase milk flow in nursing women, for colic with gas and diarrhea in infants, for bringing up phlegm from the lungs and is effective in reducing the effects of radiation and chemotherapy. It relieves intestinal spasms, hernia, is anti bacterial, soothes uterine muscles, stimulates menstruation, stimulates the appetite, reduces water retention, cleans the liver and lungs, is used as an antidote to poisonous mushrooms, expels worms, reduces nausea, dilates the bronchi, helps in treatment of kidney stones. It is also used for inflammatory conditions of the eye (conjunctivitis with swelling of the lids, for example) as a compress. The dry roasted seed relieves pain of the testes and urinary bladder. The seed mixed with salt, lowers chi (energy flow). An infusion of the root is used to treat urinary disorders.
Description	Large, winged leaves, dark green and deeply divided into many segments. Stalk grows to 4 feet, highly branched and full of whitish pith. The flowers are in flat umbels (umbrella-shaped groups) at the top of small yellow-five petaled flowers. The seed is flat, lined, brown seed.
Other	
Purchased From	Horizon

### Tropical Seeds

Common Name	Flax, Scarlet
Botanical Name	<i>Linum grandiflorum rubrum</i>
Climate	Tropical
Planting Instructions	Sow seeds directly into the garden in the spring in patches. Self sows if seeds are not collected.
Light	
Water	
Germination Rate	2-3 weeks. 75%-100% of seeds will typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	seeds
Spiritual Needs	Masculine: to enhance the beauty of one's spirit - protection - healing of the sixth chakra
Medicinal Uses	We will be working with this herb to find if it has the same properties as other kinds of flax. Flax seeds are a good source of essential fatty acids. The oil is used for inflamed and painful surfaces. It is used for pain, gastrointestinal and kidney inflammation, for irritative coughs and acutely inflamed lungs, hemorrhoids, tapeworm infestation, chronic constipation, psoriasis and boils. Flax seeds on a ripe banana peel placed on the soles of the feet overnight are excellent to relieve sore throats and fever.
Description	Brilliant scarlet flowers, annual herb with narrow leaves growing to 14 inches.
Other	
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Four-o-clocks, Marvel of Peru
Botanical Name	Mirabilis jalapa
Climate	Tropical/Subtropical/Temperate
Planting Instructions	
Light	
Water	
Germination Rate	1-4 weeks
Days to Maturity	
Special Instructions	
Part of Plant used	root, leaves
Spiritual Needs	Feminine: cleansing - purification and healing of fourth and fifth chakras
Medicinal Uses	Jalapa is used for diabetes, for liver, detoxification, inflammation, tumors, worms, bacteria, fungi and viruses. The root reduces water retention and purges the digestive tract. It is used for dropsy, worms, contusions, water retention and conjunctivitis. The leaves are used to reduce inflammation. A decoction of them is used to treat abscesses. The leaf juice is used to treat wounds, contusions, skin irritations and for fungal infections (applied locally). The flowers are used for earaches and eye problems.
Description	Herb. Flower colour purple. Flowers and fruits almost throughout the year.
Other	
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Frankincense
Botanical Name	Boswellia serrata
Climate	Tropical
Planting Instructions	Sow seeds 1/2 inch deep in sandy soil. Keep seed very warm.
Light	Full sun
Water	After planting, water for 1 week, then discontinue watering until it sprouts.
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	resin
Spiritual Needs	Masculine: energies of protection, invocation and prayer. Helps to dispell unwanted spirits. It is used to call in the male form of Spirit. Frankincense is a powerful, disciplined totem of protection, ridding negativity quickly.
Medicinal Uses	Boswellia is used for menstrual pains, rheumatic aches and pains, sores and abscesses, respiratory infections, laryngitis, asthma, fevers, leprosy, urinary infections, heavy periods, cramps, anxiety, tension, hyperventilation, eczema, scarring, sores, wounds, bruises and injuries. It promotes menstruation, improves digestion, improves liver and spleen function, brings carbuncles (boils) to a head, and is antiseptic and anti-inflammatory. It is also used for infected wounds or inflammations, secretions, respiratory problems such as asthma, cough or catarrhal (inflammation of the mucous membranes) condition.
Description	Perennial tree.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Gingko, Maidenhair Tree
Botanical Name	Gingko biloba
Climate	Temperate/Subtropic
Planting Instructions	Easily grown from seed. Sow seed in the spring in warm soil 1 inch deep in gallon pots for 1-2 years before transplanting. Cold hardy.
Light	
Water	
Germination Rate	4-7 weeks. 40% of seeds will typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	leaf, seeds
Spiritual Needs	Do not know by this name
Medicinal Uses	Ginkgo reduces inflammation, sedates the central nervous system, stimulates the circulation, dilates the blood vessels, relieves asthma, relieves allergies and muscle spasms and decreases blood clots. It is antifungal and antibacterial. It is indicated for stroke, loss of memory, heart attacks, degeneration of the retina, deafness, chronic ringing in the ears, dizziness and Alzheimer's disease.
Description	Deciduous tree with one or several main trunks and spreading branches growing to 100 feet. Female and male trees are separate. The leaves have the shape of a cross-section of the brain. The seeds are small and egg-shaped.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Ginseng; Korean Ginseng
Botanical Name	<i>Panax ginseng</i>
Climate	
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	root, leaves
Spiritual Needs	Masculine: energies of healing, protection and sexual potency
Medicinal Uses	Ginseng promotes general body vigor. The root allows the body to adapt to stress, improves digestion and elimination, soothes mucous membranes, induces vomiting, loosens phlegm, protects the liver from toxins, stops bleeding and tones the organs. It both stimulates and relaxes the nervous system, encourages the secretion of hormones, improves stamina, lowers blood sugar and cholesterol levels and increases resistance to disease. It is used internally in the treatment of debility associated with old age or illness, lack of appetite, insomnia, stress, shock and chronic illness.
	Ginseng is not normally prescribed for pregnant women, or for patients under the age of 40, or those with depression, acute anxiety or acute inflammatory disease. However, it is valuable for feverish and inflammatory illnesses, hemorrhage and blood diseases. It is also used for coughs, colds and chest problems. It is normally only taken for 3 weeks. Excess consumption can cause headaches, restlessness, raised blood pressure and other side effects, especially if it is taken with caffeine, alcohol, turnips and bitter or spicy foods. The leaf induces vomiting and loosens phlegm.
Description	Small perennial plant. The stem bears 3-5 palm-like leaves of 5 oblong, oval-like leaflets each. The flowers are greenish yellow and the fruit is small and red.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Golden Shower, Indian laburnum Tree
Botanical Name	Cassia fistula
Climate	Tropical
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	Pods, leaves
Spiritual Needs	Feminine: aids in prophetic dreams - visions - healing third chakra
Medicinal Uses	Use for tumors, pain, lack of appetite, constipation, worms, burns, epilepsy, blood in the urine, tuberculosis, anthrax, bacterial, fungal, viral and parasitic infections, liver problems inflammation and diabetes. It tones and soothes the mucous membranes, tones the kidneys, reduces water retention, stimulates the appetite and bile flow, tones the heart, relieves gas and cleanses the intestines.
Description	Tree with gray bark, big leaves divided in 4-8 leaflets, bright green on top and lighter on the underside. Flowers yellow, pods are cylindrical, pulp is black.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Henna
Botanical Name	Lawsonia inermis var. alba
Climate	Tropical
Planting Instructions	Sow seeds in the spring when the soil is warm. Keep in gallon pots for 1 year before transplanting. Prefers 15 feet between trees.
Light	Full sun
Water	Moderate water
Germination Rate	4-8 weeks
Days to Maturity	
Special Instructions	
Part of Plant used	fruit, leaves
Spiritual Needs	Masculine/Feminine: protection - healing to fourth chakra - wards off negativity
Medicinal Uses	The fruits stimulate the menstrual function. In powdered form, the leaves are used both internally and externally to treat various skin diseases, including leprosy, fungal infections, acne and boils. Leaves are used as a gargle for sore throats. An infusion or decoction of the leaves is used for diarrhea and dysentery. Leaves induce menstruation and uterine contractions. May be useful as an antibacterial and to treat growths.
Description	Fragrant small white flowers with crisped petals on a small tree to 20 feet.
Other	bees are attracted to the flowers.
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Indigo, True
Botanical Name	Indigofera tinctoria
Climate	Tropical
Planting Instructions	Sow in the spring or summer in pots or directly into garden in sandy soil. Tolerates poor soil.
Light	Full sun
Water	Well drained soil with low to moderate waterings. Drought hardy once established.
Germination Rate	soak seeds and nick the unswollen ones for germination in 1-3 weeks. 50%-75%
Days to Maturity	
Special Instructions	cut 2-4 times the first year
Part of Plant used	leaves
Spiritual Needs	Masculine: induces trance - vision and protection
Medicinal Uses	Indigo is used to induce vomiting, to clean the liver, detoxify the blood, reduce inflammation, alleviate pain, and reduce fever. It stimulates the central nervous system, improves digestive and elimination functions and purges the digestive system stimulant. It is an antiseptic and astringent dye. It is used in enlargement of liver and spleen and in epilepsy.
Description	Reddish yellow flowers, shrub grows to 6 feet with silvery branches.
Other	
Purchased From	J.L. Hudson

### Tropical Seeds

Common Name	Jequirity
Botanical Name	Abrus precatorius
Climate	Tropical
Planting Instructions	Soak seeds for 24 hours before sowing. Plant in the greenhouse or outdoors in the spring or early summer and keep warm. In warm winter areas, grow out seedlings in gallon pots for a year before transplanting. May be grown as an indoor or greenhouse plant in temperate climates
Light	
Water	Keep seed moist after planting.
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	leaves, roots
Spiritual Needs	Do not know by this name
Medicinal Uses	The juice of the leaves is used to treat upper respiratory infections. The leaves and roots can be substituted for licorice and have been used for asthma, bronchitis, fevers inflammations and allergies. As a substitute for Licorice, it can be used for stomach ulcers, for adrenal fatigue, pain, digestion, bleeding, infections (bacterial, viral, worm), tumors and for water retention.
Description	Perennial woody vine, giving pods filled with scarlet seeds.
Other	Seeds are extremely poisonous.
Purchased From	Horizon

Tropical Seeds

Common Name	Jimsonweed, Thornapple, Angel's Trumpet
Botanical Name	Datura stramonium
Climate	
Planting Instructions	Deeply dug, compost-rich soil. Give a lot of space between plants.
Light	Full sun
Water	
Germination Rate	75%-100% of seeds typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	leaves, flowering tops, seeds
Spiritual Needs	Do not know by this name
Medicinal Uses	Used in very low doses to treat asthma, whooping cough, muscle spasm, muscle twitching. It relaxes the muscles of gastrointestinal, bronchial and urinary tracts and reduces digestive and mucous secretions. Externally, it can be used to relieve rheumatic and nerve pains.
Description	robust annual growing to 3 feet. Lobed, oval leaves, long white or violet trumpet shaped flowers and spiny fruit capsules similar to those of horse chestnut.
Other	Use with extreme caution. Dosage should not exceed 1 teaspoon of the decoction of the leaves. Dosage is smaller for flowering tops and seeds (use drop dosages). Overdose of this herb results in hallucinations, loss of bowel and urinary function, loss of voluntary muscle function. Alkaloids in Datura are similar to those of Belladonna. May treat overdose with nettle seed decoction and charcoal (ingested).
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Jojoba
Botanical Name	Simmondsis chinensis
Climate	
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	oil from seed
Spiritual Needs	Do not know by this name
Medicinal Uses	Jojoba oil from the seed is used to relieve skin problems. It is effective in treating dandruff, psoriasis, dry and chapped skin.
Description	Shrub, grows to 12 feet with abundant gray/green oval leaves.
Other	
Purchased From	Banana Tree

### Tropical Seeds

Common Name	Jujube
Botanical Name	Ziziphus jujuba
Climate	Subtropic/Tropical
Planting Instructions	soak seeds for 2 days or give cold treatment for 3 months warm then 3 months cold. Alternatively, crack open stones and remove seeds. Grows well in deserts. Withstands alkaline and salty soils.
Light	
Water	Withstands drought.
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	fruit
Spiritual Needs	Do not know by this name
Medicinal Uses	The fruit aids in weight gain, improves muscular strength and increases stamina, strengthens liver function, increases immune-system resistance, reduces water retention and loosens phlegm. The leaves are astringent and reduce fever. As a plaster, they are used to treat the inability to urinate. The dried fruits are used for pain relief, growths, for calming the nerves, for cooling, for indigestion, bleeding, for chronic fatigue, loss of appetite, diarrhea, anemia and irritability. They firm up tissues, tone the spleen, improve liver function, purify the blood and aid digestion. The seed is used for pain relief, calming nerves, firming tissues, digestion, palpitations, insomnia, nervous exhaustion, night sweats and excessive perspiration. Continuous use may form dependency. The root is used for indigestion and fevers and the powder is applied to old wounds and ulcers.
Description	A deciduous tree growing to 30 feet by 21 feet, has oblong bluntly toothed leaves, clusters of small greenish yellow flowers and reddish brown or black, oval fruit.
Other	Wood is hard and compact and can be used for agricultural implements etc, and makes an excellent fuel and a good charcoal.
Purchased From	Banana Tree

### Tropical Seeds

Common Name	Lotus, Hindu; Lotus, Sacred
Botanical Name	Nelumbo nucifera
Climate	Tropical
Planting Instructions	Good in large ponds and shallow water where tubers will be out of reach of frost. Can be grown in large tubs or started in gallon jugs with stones on the bottom. File through the outer layer of the seed coat and soak. In a few days to a week they will swell and float, then they will sink and shoots emerge in about 10-15 days. Plant in pots or weight the plant with clay and drop in pond.
Light	Full sun and warmth
Water	Aquatic
Germination Rate	2 weeks. Very long lived seed, approximately 150 to 1000 years.
Days to Maturity	
Special Instructions	
Part of Plant used	all parts
Spiritual Needs	Feminine: protection - wisdom of life - clarity, focusedness - collective consciousness
Medicinal Uses	To treat various types of bleeding, vomiting blood, expectoration of blood from some part of the respiratory tract, nosebleed and profuse or continual uterine bleeding especially between menstrual periods and growths. Lotus also tones the heart, reduces fevers, reduces blood pressure, tones the stomach and dilates the blood vessels. The leaf juice is used in the treatment of diarrhea. The flowers are recommended as a cardiac tonic. A decoction of the floral receptacle is used in the treatment of abdominal cramps and bloody discharges. The flower stalk stops bleeding, especially used for gastric ulcers, excessive menstruation, post-partum hemorrhage. The stamens are used in treating urinary frequency, destruction of red blood cells, uterine bleeding and nosebleeds. A decoction of the fruit is used in the treatment of agitation, fever and heart complaints.
	The seed is sedative and is used in the treatment of poor digestion, inflammation of the intestines, chronic diarrhea, insomnia and palpitations. The radicle (root) is used to treat thirst in high febrile disease, high blood pressure, insomnia and restlessness. The root is tonic and the starch is used in the treatment of diarrhea, dysentery and a paste of the root is applied to ringworm and other skin ailments. It is also taken internally in the treatment of hemorrhages, excessive menstruation and nosebleeds.
Description	Perennial aquatic plant, with large pink-rose flowers that stand high above the water (up to 5 feet) on strong, leafless stalks and which close at night.
Other	
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Luffa Gourd
Botanical Name	Luffa cylindrica
Climate	Tropical/Subtropic/Temperate
Planting Instructions	Start in the greenhouse in May, 6 weeks before planting outdoors or sow outdoors when the soil is warm. Give compost during growing time. Provide a trellis for the vine to climb.
Light	Full sun
Water	
Germination Rate	10-30 days
Days to Maturity	100 days
Special Instructions	
Part of Plant used	fruit, vine
Spiritual Needs	Do not know by this name
Medicinal Uses	Luffa increases bile flow and helps the production of milk. It is used to treat pain in the muscles, joints, chest and abdomen as well as chest infections with fever and pain. Clears congested mucus and treats painful swollen breasts. The vine has shown it loosens phlegm better than the fruit.
Description	Annual vine climbing to 50 feet with large, lobed leaves, tendrils and yellow female flowers producing long, cylindrical marrow like fruit.
Other	The mature fruit can be dried and used as a sponge.
Purchased From	Horizon

Tropical Seeds

Common Name	Mint, Mayan
Botanical Name	Lippia dulcis
Climate	Tropical/Subtropic
Planting Instructions	Does well in rock gardens, in the desert or coast. Prefers compost-rich soil. Requires a small amount of space between plants.
Light	Full sun
Water	Prefers moist soil. Drought tolerant once established.
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	leaves
Spiritual Needs	Masculine: aids in dreamtime - purification. Energies of stimulation and travel, bringing pleasure and sensual activity. Mints are lively herbs that are protective to those who travel. Mints are partnership plants - their energies are very weak when on their own but bring an additional quality when used in combination with other herbs.
Medicinal Uses	Used to soothe irritated mucous membranes and skin and to loosen phlegm. We will be working with this plant to see if it has similar properties to other mints.
Description	Shrub growing to 6 feet with strongly scented lance-shaped leaves and clusters of tubular pale green to mauve flowers.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Musk Mallow
Botanical Name	Abelmoschus moschatus
Climate	Tropical
Planting Instructions	Plant early indoors for prolonged bloom time. Heat resistant.
Light	
Water	
Germination Rate	10 Days
Days to Maturity	
Special Instructions	
Part of Plant used	seed, essential oil
Spiritual Needs	Do not know by this name
Medicinal Uses	The chewed seeds are used as a poultice for snake bites and to bring on menses. Internally seeds are used as a digestive aid. Externally they are used for cramps, poor circulation and aching joints. The essential oils is used for anxiety and depression.
Description	Bushy plant, 1-2.5 feet tall with 5 petaled pink to red flowers. Leaves are 3-5 lobed.
Other	
Purchased From	Banana Tree

### Tropical Seeds

Common Name	Noni, Indian Mulberry Tree
Botanical Name	Morinda citrifolia
Climate	
Planting Instructions	
Light	
Water	Keep seed quite moist at all times.
Germination Rate	Can be slow germinating.
Days to Maturity	
Special Instructions	Do not know by this name
Part of Plant used	leaves, fruit, root
Spiritual Needs	
Medicinal Uses	<p>Noni leaves are used after childbirth to "return" the womb to its original position. They are also used to reduce blood clots and induce menstruation and as a poultice to treat skin ailments and inflammation. When leaves are brushed with oil and put over flame and placed on the chest and stomach region they are used to treat liver inflammation and flatulence. Leaf infusions are used for fever, leaf juice for gingivitis, sore throats, leaf poultices for abscesses, boils, swelling, arthritis and ringworm. The essence of the flower is used to treat eye inflammation, the decoction of the bark is used for dysentery and malarial fever and coughs. The fruit is blended together with the seeds and the juice extract is used as a remedy for hypertension, diabetes and rheumatism.</p>
	<p>The fruit and leaves offer anti-bacterial activity and appear to stimulate tissue growth and repair. Unripe fruit was used as a mouthwash, the fruit and root infusion is used for intestinal parasites and charred unripe fruit with salt is used on diseased gums. The roots can also be helpful in increasing white blood cell (leukocyte) count, and stimulating the endocrine system. The roots are used to treat hemorrhoids, nasal congestion and cerebral hemorrhage.</p>
Description	<p>The Noni plant is an evergreen that can range from a small bush to a 30-foot tall tree. The tree produces a fragrant white flower that blooms year round. Noni fruit has a lumpy texture, looks similar to a hand grenade, and has a rancid taste and smell when fully ripened. The fruit is covered with reddish-brown pits that contain seeds. Each seed has an attached air sac that allows it to float for months in the ocean.</p>
Other	
Purchased From	Banana Tree

### Tropical Seeds

Common Name	Nux Vomica
Botanical Name	Strychnos nux vomica
Climate	Tropical
Planting Instructions	Soak seeds in hot water for 6 hours then cool overnight. Sow in warm soil.
Light	
Water	Allow soil surface to dry out completely between waterings.
Germination Rate	40 days
Days to Maturity	
Special Instructions	
Part of Plant used	seeds
Spiritual Needs	Have not used spiritually
Medicinal Uses	Nux vomica affects the nerves, stomach, spine, respiratory system and heart. It causes vomiting and is high in alkaloids. It is a cooling and mild astringent. Its main action is tonifying to the organs. Must only be used when there is no inflammation or congestion present. It is indicated in lack of firmness in tissue, a pallid and expressionless tongue - uncoated, or coated with a pasty-yellowish coat; yellowness of the conjunctiva; yellow or sallow countenance, and yellowish or sallow line around the mouth; fullness and dull pain under the liver; pain in shoulder, colicky pains pointing to the umbilicus; menstrual colic; constipation; diarrhea due to lack of tissue firmness; cholera, chronic dysentery, functional forms of paralysis, heartburn, flatulent colic, liver and spleen congestion, typhoid fever, asthmatic seizures, bedwetting of children, paralytic retention of urine.
	It is used in eye diseases such as dimness of vision, nervous affections of the eyelids, conjunctivitis and in liver complaints and fever. It has also been used in nerve pain, muscle twitches, sinking of the rectum, rumbling of the stomach or intestines of females, rheumatism and worms. Dose for nux vomica tincture is 5 drops gradually increased to no more than 30 drops in 4 ounces of water and taking one teaspoonful every 1 to 3 hours, as indicated.
Description	This is a moderate-sized tree, with a short, thick, often crooked trunk. The branches are irregular, covered with smooth, ash-colored bark; the young shoots deep-green and highly polished. The wood is white. The leaves are opposite, short-stalked, oval, shining, smooth on both sides, The flowers are small, greenish-white, funnel-shaped with a disagreeable odor. The fruit is a berry, round, about the size of a large apple, covered with a smooth, hard rind, of a rich-orange color when ripe, and filled with a white, soft, gelatinous pulp. The seeds are 5 covered with a fine woolly substance, but whitish and hard .

Tropical Seeds

	Nux Vomica continued
Other	This herb must be used with caution as it may be harmful if used inappropriately. The toxic effects of nux vomica are as follows: in poisonous doses, stiffness, weariness, pain or rending in the limbs, violent titanic (spastic muscle) convulsions, with short intervals of repose, acute sensibility, dreadful alarm, and finally death; in small doses, twitching of the muscles, restlessness, anxiety, and increase of urine, perspiration, etc.; when the doses are rather large, there will be more active spasm of the muscles, a tendency to lockjaw, with the preceding symptoms more or less severe. Heat in the stomach region, constriction of the throat, headache, dizziness, and impairment of vision with closely contracted pupils, are often caused by small doses; and more especially with the obese and blind, there will be painful sensations in the skin compared to an electric shock, or to the creeping of insects over the surface, with more or less perspiration, slight involuntary spasms of the muscles, and a very disagreeable, dreamy or vague condition of the brain. The pulse may or may not be increased in frequency.
Purchased From	Horizon

### Tropical Seeds

Common Name	Oregano, Wild Oregano
Botanical Name	Origanum vulgare
Climate	Tropical/subtropic
Planting Instructions	Press firmly into soil surface. Sow early in pots or blocks or sow directly into garden in early spring. Prefers a moderate amount of space.
Light	Full sun
Water	Dryish and well drained soils
Germination Rate	Seeds have 3-5 year viability
Days to Maturity	Will be established by winter.
Special Instructions	Harvest leaves and bracts in late flower
Part of Plant used	leaf, essential oil, flowers
Spiritual Needs	Masculine - purification - protection from spiritual wounds
Medicinal Uses	Oregano is used to promote perspiration to treat colds, flu and fevers. It is also used for under-stimulated metabolism, respiratory system, is generally tonifying to the organs, viral diseases, burns, wounds, abscesses, respiratory or catarrhal (inflammation of mucous membrane) condition, infectious diseases, muscular or joint pain, circulatory pain, mucous discharge from vagina or urethra, inflammation of urinary bladder, digestive disturbances such as indigestion, to bring on menses, to clear the lungs and bronchial passages and for intestinal parasites and worms. Oregano reduces muscle spasm, calms the nervous system and will ease a toothache. The bruised leaves in a pillow can help with insomnia. Poultices of the leaf soothe painful swellings. Infusion of the flowers prevent seasickness.
Description	Perennial plant with square, downy, purplish stem with opposite, oval leaves that are dotted with small depressions. Flowers are purple, two-lipped growing in clusters.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Palo de Pulque
Botanical Name	Acacia angustissima
Climate	Tropical/Subtropic/Temperate
Planting Instructions	Excellent in pot in a cool greenhouse or on a sunny windowsill. Drought resistant
Light	
Water	
Germination Rate	75%-100% of seeds will typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	
Spiritual Needs	Do not know by this name
Medicinal Uses	Palo de Pulque is used for diarrhea, muscle spasms, bacterial infections and tumors.
Description	White, puff-like flowers tinged pink or lavender with feathery divided leaves. Shrub grows to 5 feet.
Other	High in tannins
Purchased From	J.L. Hudson

### Tropical Seeds

Common Name	Plantain, Anasazi also known as Snakebite - Snakeweed - White Man's Foot
Botanical Name	Plantago major
Climate	Tropical/Subtropic/Temperate
Planting Instructions	Easily grown from seed. Sow on the surface of the soil and press in when the soil is cool. Prefers a small amount of space.
Light	Full sun/partial shade
Water	Keep seeds moist before germination.
Germination Rate	Long lived seed, light dependent germinator.
Days to Maturity	
Special Instructions	
Part of Plant used	leaves
Spiritual Needs	Feminie: Healing, strength, protection
Medicinal Uses	Plantain stops bleeding. It is used for bruises and broken bones - can be used instead of comfrey. As an ointment or lotion, it can treat hemorrhoids, abnormal openings in the skin (fistulas) and ulcers. Internally, it removes excess water, loosens phlegm and decongests. It is used for shock, fever, high blood pressure, growths, abscesses, rheumatism, gastritis, peptic ulcers, diarrhea, dysentery, irritable bowel syndrome, respiratory congestion, loss of voice, asthma, urinary tract bleeding and for wound healing. It can draw out foreign objects embedded in tissue and is excellent for burns, stings and bites as a poultice. The root can be chewed to ease a toothache and is used to regulate glandular function.
Description	Perennial plant growing to 10 inches with basal broad, deeply veined leaves and dense clusters of tiny green flowers on spikes.
Other	wards off snakes - repellent
Purchased From	Horizon

Tropical Seeds

Common Name	Poppy, Prickly
Botanical Name	Argemone munita
Climate	Subtropic/Tropical
Planting Instructions	Sow seeds in a warm place. Put seed in hot water and soak overnight. Withstands hot, barren soils. Sow where they are to stand or transplant from pots. Self seeds if seeds are not collected.
Light	
Water	Withstands dry soils. Drought resistant.
Germination Rate	Sporadic, but reliable germination. Seed half life is 4-5 years.
Days to Maturity	
Special Instructions	
Part of Plant used	seeds
Spiritual Needs	Feminine: works with understanding of feelings - fertility, invisibility - ceremonies - journeys, dreams. This plant has been used as a smudging herb by Native American peoples of the Southwest and Mexico
Medicinal Uses	Prickly Poppy contains a large number of alkaloids, including codeine, morphine, berberine, which can be used for pain, The essential oil extracted from the seeds was found to cause cataracts and lethal edema - do not use the fresh or dried seeds for anything. Roasted and smashed seeds have been used as a salve for burns. The tea of the dried plant is pain relieving and anti-inflammatory.
Description	annual plant with big white flowers with gold yellow centers
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Rauwolfia
Botanical Name	Rauwolfia serpentina
Climate	Tropical
Planting Instructions	Sow seeds in a warm place in compost-rich soil.
Light	full sun
Water	
Germination Rate	Long germination time
Days to Maturity	
Special Instructions	
Part of Plant used	root
Spiritual Needs	Do not know by this name
Medicinal Uses	Used in treating high blood pressure and anxiety, high blood sugar, hypochondria, insomnia and other nervous disorders. It is a slow-acting remedy and takes time for its effect to be fully established. It is also known as an antidote for snake bites, a remedy for headaches, states of anxiety or fear, feverish conditions and abdominal pain.
Description	Evergreen shrub growing to 3 feet. Leaves are elliptical, growing in whorls with tiny, pink and white tubular flowers and glossy red berries.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Ethiopian Sage
Botanical Name	Salvia aetheopsis
Climate	
Planting Instructions	Prefers sandy soil. Sow from early spring to early summer or start early in the greenhouse and transplant outdoors after soil has warmed up. Drought tolerant as they mature. Cultivate as an annual or bring indoors for the winter.
Light	Full sun
Water	Water daily until germination. Mature plants prefer dryish soils
Germination Rate	6 days
Days to Maturity	
Special Instructions	Harvest leaves in the late summer
Part of Plant used	
Spiritual Needs	Masculine - higher wisdom - shamanic - journey - clearing. Energies of wisdom, long life and purification. Sage brings a clarifying energy which aids in clear perspective.
Medicinal Uses	Strong anti-bacterial. We will be working with this plant to see if it has similar properties to other sages.
Description	Biennial herb with a downy, gray green basal leaves the first year, flowers in a pyramid shape the second year.
Other	
Purchased From	Horizon

Tropical Seeds

Common Name	Saw Palmetto
Botanical Name	Serenoa repens
Climate	Tropical
Planting Instructions	Grows well in poor, sandy, acidic (compost-rich) soil.
Light	Partial shade
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	berries
Spiritual Needs	Do not know by this name
Medicinal Uses	Saw Palmetto is used to reduce water retention, to loosen phlegm, to tone the neck of the bladder and prostate, to tone the system after an illness. It is used for colds, asthma, bronchitis, mucous congestion. It is indicated for lack of development or wasting away of the testicles, ovaries or mammary glands, prostatic irritation with painful urination and dribbling of urine, painful urination. It is also used to balance male hormones (testosterone, androstenodione) in both men and women.
Description	Low, shrubby plant with palm-like, white coated leaves on saw-toothed stalks. The berries are olive like, dark-purple to black berries growing in bunches.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Snake Gourd
Botanical Name	Trichosanthes kirilowii
Climate	Tropical
Planting Instructions	Soak seeds overnight and plant "ears up" in warm soil in the greenhouse 6 weeks before planting outside. Provide a trellis or a fence for them. Plant on hills with a lot of spacing and side-dress with compost occasionally.
Light	full sun
Water	
Germination Rate	
Days to Maturity	100 days
Special Instructions	Harvest green gourds just before the first frost and keep in burlap sacks.
Part of Plant used	leaf, stem, fruit, root and seeds
Spiritual Needs	Do not know by this name
Medicinal Uses	<p>The leaf and the stem lower fevers.</p> <p>The fruit is antibacterial (E. coli, dysentery, typhoid, paratyphoid, Pseudomonas, cholera and proteus bacteria), antifungal, it opens up elimination pathways (digestive, urinary, lymph, skin and lungs), lowers cholesterol, is soothing to the skin and mucous membranes, loosens phlegm and relieves constipation. It is indicated for pulmonary infections with yellow and thick sputum, chest pains, stuffy feelings in the chest, constipation and dry stool.</p> <p>The rind of the fruit is used to treat a number of ailments, including growths, jaundice, retained placenta, bronchial infections with thick phlegm and sore throats.</p> <p>The seed relieves coughs, soothes the mucous membranes and skin and loosens phlegm.</p>
	<p>The root is antibiotic, anti-inflammatory, lowers fevers, increases milk flow, relieves constipation, induces uterine contractions, increases salivation, tones the uterine muscles and has been known to effectively inhibit HIV virus. The root is taken internally in the treatment of diabetes, dry coughs, and to assist in the second stage of labor. The root and/or the seed is powdered and used in the treatment of mammary growths.</p>
Description	Perennial climbing vine growing to 18 feet at a fast rate. Has separate male and female plants.
Other	Caution: do not use during pregnancy - due to its effect on uterine muscle it may cause a miscarriage. An edible starch is obtained from the root. It requires leeching, which probably means that it has a bitter flavor. The root is harvested in the autumn, cut into thick slices, soaked for 4 - 5 days in water, changing the water daily until the root disintegrates and can be mashed into a fine pulp. It is then steamed into cakes or used for making dumplings.
Purchased From	Horizon

Tropical Seeds

Common Name	no common name in catalog
Botanical Name	Solanum khasianum
Climate	Tropical
Planting Instructions	Sow where they are to stand
Light	
Water	
Germination Rate	1/3 of the seeds germinate in 2-4 weeks, the rest in 4 months. 50%-75% of seeds will typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	leaves
Spiritual Needs	Do not know by this name
Medicinal Uses	The leaves are used as a contraceptive, and may have anti-inflammatory properties due to its solasodine compound (a cortisone-like compound).
Description	Shrub, grows to 2-4 feet with 1/2 inch flowers and green and white 1 inch fruits that turn yellow at maturity. Leaves are large
Other	
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Stevia
Botanical Name	Stevia rebaudiana
Climate	Tropical
Planting Instructions	sow seeds in the greenhouse or in the summer in compost-rich warm soil. Sow on the surface and press in. Prefers a moderate amount of spacing.
Light	Full sun/Partial shade
Water	Humidity, plenty of water
Germination Rate	1-2 weeks. 70% of seeds will typically germinate. Heat dependent germinator
Days to Maturity	
Special Instructions	
Part of Plant used	leaves
Spiritual Needs	Do not know by this name
Medicinal Uses	Stevia is a wound healer, digestive aid and blood sugar regulator. It balances pancreatic function.
Description	Tender perennial shrub.
Other	Used to sweeten drinks.
Purchased From	Horizon

Tropical Seeds

Common Name	Sweet Gum
Botanical Name	Liquidambar styraciflua
Climate	Tropical/Subtropic/Temperate
Planting Instructions	
Light	
Water	
Germination Rate	2-4 weeks
Days to Maturity	
Special Instructions	
Part of Plant used	gum resin, root, bark, leaves
Spiritual Needs	Masculine: to ward off negativity - enhances knowledge
Medicinal Uses	Sweet gum tones tissues, soothes irritated mucous membranes and skin, loosens phlegm. It is used topically as an ointment on wounds and skin infections such as scabies and ulcers. It is antiseptic. A decoction of the root or leaves is used as a wash to treat injuries. The gum is used to loosen phlegm and ease respiratory congestion. The bark is used to relieve diarrhea and dysentery.
Description	Large, star shaped, 5-7 lobed leaves that turn crimson in the fall. Tall tree to 50-150 feet. Fruits are ball-shaped and spiky.
Other	
Purchased From	J.L. Hudson

### Tropical Seeds

Common Name	Tea Tree, Oil; Paperbark
Botanical Name	Melaleuca alternifolia
Climate	Temperate/Subtropic/Tropical
Planting Instructions	Sprinkle the seeds on top of light potting soil and press in. Keep warm until germination.
Light	
Water	Soak the soil blocks in a tray of water until they have absorbed the water to the top, or mist them gently to water them until they have sprouted.
Germination Rate	5-40 days, with variable germination
Days to Maturity	
Special Instructions	
Part of Plant used	essential oil, bark, leaves
Spiritual Needs	Masculine: encourages strength and courage to speak truths
Medicinal Uses	Used for fungal /yeast infections, topically, as a gargle, ointment or oil. Strong disinfectant, antibacterial. The essential oil is used as an antibacterial wash, for burns, vaginal and urinary infections, skin ailments, ear, nose and throat infections, tuberculosis. Inhalation of the oil is effective for colds and flu. Leaves are used for fevers (in a bath with crushed leaves in the water). New leaves were chewed or soaked in hot water and drunk as treatment for head aches and head colds. The bark is used to wrap around wounds like a bandage. An infusion of the leaves or the essential oil is also used for abscesses, boils, anthrax (as a wash to prevent infection), athlete's foot, bronchitis, chest infections, chilblains (frostbite), cold sores, cuts and wounds, fever, folliculitis (irritation of skin follicles), hay fever, headaches, impetigo (skin infection), mouth ulcers, nerve pain, pneumonia, sinusitis, stings and bites.
Description	small tree growing to 23 feet with small, soft, narrow leaves and cream, showy, bottlebrush like flowers, that produce small, closely set woody capsules and the branches.
Other	Flowers were sucked to collect the sweet nectar or dunked in water to make a sweet drink. Leaves and bark were laid over meat and hot stones to keep in heat and moisture. Small canoes could be made to get small children across a creek. Bark was used to make knife sheaths and sandals, for serving food, for shelter, for warmth while sleeping, and for wrapping corpses.
Purchased From	J.L. Hudson

### Tropical Seeds

Common Name	Tobacco, Tree; Don Juan, Isil-Pivat, Tree, Tobacco
Botanical Name	Nicotiana glauca
Climate	Tropical
Planting Instructions	Mix seed with sand prior to sowing in trays in the greenhouse or directly into the garden in the spring or early summer. Press hard into surface. Do not allow to dry out or freeze. Prefers a moderate amount of spacing. Prefers well-composted soil and added fertilizer of compost and rotted manure.
Light	Full sun
Water	Do not over-water
Germination Rate	Light-dependent germinator. 10-14 days
Days to Maturity	80 days
Special Instructions	
Part of Plant used	Leaves
Spiritual Needs	Masculine/feminine: used spiritually as an offering to the directions and ancestors for blessings and thanksgiving.
Medicinal Uses	A poultice of the leaves can be applied to cuts, bruises, swellings and other wounds. The plant is used as a poultice for removing the pus from sores or boils. A poultice of the leaves has been applied to inflamed throat glands. An infusion of the leaves is used as a steam bath in the treatment of rheumatism. Poultices have been used mainly abdominally to induce vomiting, for worms, to decongest and to reduce inflammation. Leaf teas were also taken internally for urinary tract infections, to induce vomiting, as both an effective purgative and also as a treatment for diarrhea, and to treat convulsions.
Description	An evergreen shrub growing to 9 by 9 feet with slender trunk or trunks of soft wood, growing to about 20 feet and sporting large gray-green leaves and tubular yellow flowers throughout the year.
Other	Use this herb with caution as in large dosages it can induce vomiting, nausea and gastrointestinal distress.
Purchased From	J.L. Hudson

Tropical Seeds

Common Name	Velvet Bean, Kapikaccu
Botanical Name	Mucuna pruriens
Climate	Tropical
Planting Instructions	
Light	
Water	
Germination Rate	
Days to Maturity	
Special Instructions	
Part of Plant used	seeds, fruit, leaf, root
Spiritual Needs	Do not know by this name
Medicinal Uses	The fruit is used for worms, rheumatism, to bring blood to the surface. The root is used to reduce water retention, for nervous disorders and delirium and the leaf is used to stimulate contractions of the uterus and for hemorrhoids. The herb is also used to relieve pain, to antidote poison, for swelling in the connective tissues, asthma, tumors, cholera, cough, diarrhea, dog bites, dropsy, urinating problems, insanity, mumps, inflammation of the lung membranes, ringworm, snakebite, sores, syphilis, tumors, high blood pressure, high blood sugar, poor circulation and rheumatism. The fruit contains L-dopa, a neurotransmitter in the brain that regulates mood, sleep and learning. Do not use during pregnancy as it can induce a miscarriage.
Description	It is a herbaceous twining annual. Leaf has 3 oval leaflets, purple flowers growing in groups along the stalk. The fruit is a ribbed pod with pale-brown, gray blisters. The seeds are oval shaped and black.
Other	Contains tannins. Do not use with alkaloid containing plants.
Purchased From	Banana Tree

Tropical Seeds

Common Name	Ylang Ylang
Botanical Name	Cananaga odorata
Climate	
Planting Instructions	
Light	
Water	
Germination Rate	Seed has a very hard coat. It can take time for this seed to germinate.
Days to Maturity	
Special Instructions	
Part of Plant used	flowers, essential oil
Spiritual Needs	Do not know by this name
Medicinal Uses	Flowers and essential oil calm the nerves and are antiseptic. Ylang Ylang is uplifting, calming and sedative. The oil has a soothing effect, it slows down the heart rate and lowers blood pressure. Do not take oil internally. It is indicated for high blood pressure, palpitations, rapid heartbeat (tachycardia) and hyperventilation. External application of essential oil is antiseptic.
Description	Evergreen tree growing to 80 feet. Has lance-shaped leaves and strongly scented yellow-green flowers.
Other	
Purchased From	Banana Tree

Tropical Seeds

Common Name	Zombi Apple, Passionflower
Botanical Name	Passiflora rubra
Climate	Tropical
Planting Instructions	Sow in rich, fibrous soil with lots of manure and warmth while growing.
Light	
Water	Plenty of water while growing.
Germination Rate	Scarify (rub small seeds between sandpaper; for large seeds, clip, cut or file off a small part of the seed coat without damaging the inside of the seed). 1 day or so at 100-120 F. 50%-75% of seeds will typically germinate
Days to Maturity	
Special Instructions	
Part of Plant used	leaves
Spiritual Needs	Do not know by this name
Medicinal Uses	Indications for passionflower include irritation of the brain and nervous system with lack of tone, insomnia from overwork or worry or feverish excitement, sleeplessness among young and aged, infantile nervous irritability, palpitation of the heart from excitement or shock. Passionflower relieves muscle spasms, induces sleep, lowers blood pressure, induces perspiration and relieves pain (has similar properties of morphine). It is also used for rheumatism, to bring on menses and as a substitute for morphine.
Description	Woody, hairy climbing vine reaching length of 30 feet. Leaves are palm like and have 3-5 lobes. Flowers are purple, blue or pink and fruit is almost as large as a chicken egg.
Other	
Purchased From	J.L. Hudson