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LILLY'S

Crop Book



The Chas. H. Lilly Co.

Established 1885

SEEDS FEEDS FERTILIZERS

LILLY'S "Life Insurance" Feed

for
**BABY
CHICKS**



Contains
Buttermilk

"IT'S COOKED"

It's cooked to make it more easily digested. It contains Buttermilk which, by virtue of the Lactic Acid it carries, wards off intestinal and digestive disorders. It is palatable, therefore, chicks eat it greedily. It is wholesome and nutritious, and, because in addition to all these virtues, it is properly balanced for young chicks; it produces results obtainable with no other feed.

If you could only see for yourself how this LIFE INSURANCE FEED is made you would more readily appreciate its real value. The object is first to make a scientifically balanced food for baby chicks and second to make one that chicks can easily assimilate or digest and this is the big secret of the real value of LILLY'S LIFE INSURANCE FEED, it is easily and quickly digested because it's cooked and composed of the right ingredients in the proper proportion.

Over one-half of the nutrients in it are digested by the chick within an hour and practically all of it before the end of two hours.

We Offer a Complete Line of
POULTRY FEEDS

In addition to LIFE INSURANCE and 335 EGG MASH your Dealer can supply you with the following:

Lilly's Chick Mash	Lilly's Chick Food
Lilly's Growing Mash	Lilly's Growing Food
Lilly's Moulting Mash	Lilly's Scratch Food
Lilly's Fish Flakes	Lilly's Fattening Mash

Price subject to change

3-lb. carton	\$.40
25-lb. sack	1.55
100-lb. sack	5.75

F. O. B. SEATTLE

LILLY'S 335-EGG MASH

Is consumed with relish. Has a high digestible content. Is wholesome in every respect. Its mechanical condition is right. Its balance is in accordance with the most modern feeding knowledge. Its uniformity is a matter of great pride to us and is insured by the reputation we have to maintain. Its cost is over-shadowed by the results it produces and as one of our famous Tire advertisers says, "It's risky to pay less." If you don't feed it you pay for it anyway by passing up the possible increased production you might enjoy by its use.



LILLY'S
335
EGG MASH

PRODUCED THE WORLD CHAMPION HEN

LILLY'S CROP BOOK

A condensed booklet of information on such Vegetable Crops, Flowers, Grains, Grasses, Forage Crops, etc., as are grown from seed and are suited for cultivation in the northwest and particularly in the territory west of the Cascade Mountains. In this edition much of the information has been revised and made to conform to the most modern and scientific ideas and teachings.



Published By

THE CHAS. H. LILLY CO.

Growers of Vegetable, Flower and Field Seeds
Manufacturers of Fertilizers, Feeds and Flour

Established 1885
Seattle, Washington
Thirteenth Edition

The Origin of Agriculture

Unmeasured honor was paid to vegetables in ancient days. Monarchs exchanged them as gifts, wise men and warriors supped on them after study and battle, chiefs of the noblest descent prepared them with their own hands for their own tables, and pious populations honored some of them as gods.

The traditions of ancient peoples commonly attribute the first steps in agriculture and the introduction of useful plants to some divinity, or at least to some great emperor. However, between the custom of gathering wild fruits, grain and roots and that of the regular cultivation of the plants which produce them, there are many steps. It has well been said that the "beginnings of civilization are always feeble, obscure and limited."

So far as the principal species of cultivated plants are concerned, agriculture came originally from these regions: Egypt (Valley of the Nile), Mesopotamia (Valley of the Euphrates), China and America (Peru, the home of the Incas, and Mexico, the home of the Aztecs).

No people of antiquity are better known to us than the Egyptians, the builders of the Pyramids, the Sphinx and the innumerable monuments and temples that dot the narrow valley of the Nile. The people, who more than 5,000 years ago, had attained a stage of civilization that offers no mean comparison, in many respects, to the civilization of the 20th century.

On what did they subsist? Then as now, their diet consisted largely, and among the poorer classes almost exclusively of vegetables. Herds of cattle browsed along the Nile, but by a prudent foresight—where pasture lands could never be extensive—the cow was held as sacred and forbidden to be eaten. Poultry was raised too, but the great variety and abundance of vegetables and wheat formed the chief food supply. Among those mentioned by early writers, shown in early paintings, and found in the tombs (for the use of the dead) are cucumbers, melons, leek, gourds, turnips, radishes, onion, lentils, etc. Comparatively few of our common garden vegetables were unknown to these people thousands of years ago.

When Rome became too populous to be supplied by the surrounding agricultural districts of Italy, she obtained the greater part of her staple food products from Egypt, which was then called the "granary of the world."

When the city of Alexandria was surrendered to the Mohammedans, no less than 4,000 persons were engaged in selling vegetables in that city.

In 2700 B. C., the Chinese emperor, Chen-ming, instituted the ceremony at which every year, five species of useful plants are sown—rice, wheat, sweet potatoes, and two kinds of millet. It would naturally be supposed that these plants must have been cultivated for sometime in certain localities before they attracted the emperor's attention to such a degree.

When the Aryans of Western Asia began to migrate into Europe about 2500 B. C., they carried with them many species of cultivated plants.

At an early date, agriculture was carried on extensively by the Greeks and the Romans. These nations paid much attention to the cultivation of their fields and gardens and to be accounted a good husbandman among the ancient Romans was the highest praise. Their food was of the simplest kind; they rarely indulged in meat and wine was almost wholly unknown. So averse were they to luxury that epicures were expelled from among them. But when they became rich through conquest and commerce, the manners of the people were changed and the pleasures of the table became the chief object of attention.

From the Pent-sao, documents written in the Middle Ages, we learn that China entered, for the first time, into relations with Western Asia in the second century B. C. and that Chang-Kien, the ambassador who negotiated these relations, carried back with him to China the bean, cucumber, lucern (alfalfa), saffron, sesame, walnut, pea, spinach, watermelon and other western plants then unknown to the Chinese.

The last great diffusion of plants was brought about by the discovery of America in 1492. The plants then being cultivated by the Americans in Peru and Mexico, the potato, maize, prickly pear, tobacco, etc., were then first imported into Europe and Asia, and at the same time, plants from the old world were introduced into America.

Long after the common garden vegetables were used and cultivated by the Greeks and Romans, the diet in the northern countries of Europe was chiefly meat, with the exception of acorns, wild crabs, nuts and berries which grew wild.

An English writer of an early date states: "Before the era of kitchen-gardens, scurvy was one of the processes by which the English population was kept down.

Carrots, cabbage and some other vegetables are said to have been introduced into England near the close of the 15th century; but in the time of George , almost

a century later, a salad was so scarce an article in England that the king was obliged to send to Holland for his greens.

France used vegetables at an earlier date; the great Emperor Charlemagne was a royal market gardener, and a writer of that time adds, "he found more profit in his salads than he did in his sons."

Curious Beliefs Regarding Vegetables

Even as late as the 16th century most plants were valued chiefly for their known or supposed medicinal qualities. The shape, color or makings of a plant often determining its medical virtues, as in the case of the hepatica or liverwort. Its leaves resemble the human liver, therefore, nature provided it to be used for all complaints of the liver.

The water-cress which was honored and eaten by the Persians, was medically esteemed as a cure for consumption, or, by placing it in the ears, a cure for toothache. By others this was denounced and was declared to have the power of twisting the noses, of those who put it into their mouths.

In some parts of Olde Englande there was an opinion that "they who eat of old parsnips that have been long in the ground, invariably go mad;" and on this account the root was called "madnip."

The Greeks and Romans, believing the cabbage and grape to be enemies, took cabbage as a remedy for the languor following intoxication. Cato, an early philosopher, declared cabbage to be a panacea for the ills of man. Another early philosopher recommended it as a special remedy for paralysis. Diphilus, however, preferred the beet to the cabbage, both as food and medicine. This same physician extols mallow as a good edible vegetable, appeasing hunger and curing sore-throat at the same time.

The sweet potato was recommended as a tonic.

The egg plant was anciently believed to be a poison, especially to the wits, whereof it had the names of "raging apple" and "mad apple."

Certain doctors in Greece denounced asparagus as injurious to the eyesight; but it was also said that a slice or two of boiled pumpkin would re-invigorate the sight which had been injured by asparagus.

Purslain was honored as a cure against poisons.

Artichokes, for a long time, were used only by drinkers for headaches, and by singers to strengthen their voice. Pliny pronounced artichokes excellent food for

poor people and donkeys; for nobler stomachs he preferred the cucumber—the Nemesis of vegetables.

Lettuce was prescribed as a sleep-producing medicine.

Endive was considered good for the headache.

Young onions and honey were believed to be admirable preservers of health when taken fasting.

Because the mother of Apollo was said to be fond of raw leeks, they were accounted as a beautifier.

If an onion were hung in rooms where people congregate, it was believed to have the power to draw to itself the diseases that might otherwise afflict them. Onions were also believed to inspire courage in the hour of battle.

The Egyptians defiled the garlic as they did the leek and cabbage. Medicinally it was held to be useful in many diseases if the root used were originally sown when the moon was below the horizon. No one who had eaten of it, however, could presume to enter the Eemple of Cybele /the mother of the gods).

The horseradish, dipped in poison, rendered the draught harmless; and rubbed on the hands, it made an encounter with venomous serpents mere play. In short, it was celebrated as being a cure for every evil in life—the only exception being, it destroyed the teeth.

Hercules and Anacreon crowned themselves with parsley. This plant was worn both at joyous banquets and at funeral feasts.

Other early records tell us that the bean begat insanity; that it caused nightmare; to dream of it meant trouble; that Ceres, the goddess of vegetation, did not consider it worthy to be included in her gifts to man; that the oracles would not eat it lest their vision be clouded; and that the priests of Jupiter would neither look upon it nor pronounce its name.

On the other hand, the priests of Apollo banqueted on a dish of beans at one of the festivals to their god.

Vegetable Gardening

It is interesting to know that a good garden will reduce your grocery bill one-third, and that vegetables are necessary in the human food supply. If you want fascinating pastime, health-giving exercise, and that happiness that comes with accomplishment—make a garden. Begin today and every hour spent in your garden will show you something new, something more interesting, something that will help you to enjoy living.

The wide-awake gardener begins sowing as early in spring as possible, and sows succession crops throughout the summer and until late in the fall. Succession crops are most important since they provide fresh vegetables for fall and winter use. A cellar full of stored vegetables is a good in-

vestment. Grow all the vegetables your garden can produce, eat them fresh, evaporate them, can them, store them, and be independent of high food prices.

World-famous scientists have discovered by actual laboratory tests that many diseases, like rheumatism, gout, nervous troubles, etc., originate from the collection of poisonous germs in the intestines. These famous physicians have pointed out that the way to avoid this condition is to use salads, such as chicory, collards, cabbage, lettuce, spinach, etc., plentifully. Europeans have known this for years. The French call spinach "the broom of the stomach." If you would have health, grow salad plants plentifully, and use some form of salad vegetable every day, not just once in a while.

Artichoke

(Jerusalem)

A tuberous-rooted sunflower-like plant that thrives on any soil and is grown for the food value of its tubers. All kinds of farm animals seem to be fond of them. They are propagated the same as potatoes, the seed tubers often being cut to single eyes. Leave the matured tubers in the ground until wanted, frost does not injure them. If grown for hogs let them do their own digging. Established fields will volunteer crops for years if not "hogged out" too closely. Used also in a limited way, for human consumption as a salad.

"White Jerusalem" Artichoke

(Season March 1st to May 15th)

Per Pound, 5c

Quantity Price on Application

Artichoke

(Green Globe)

A coarse robust perennial cultivated for its edible flower-heads and leaves. The plant is thistle-like in appearance and the suckers or young side shoots are sometimes blanched and cooked like asparagus. The flower-heads are 3 to 5 inches in diameter and made up of fleshy scales. These outer scales and the bottom of the head are eaten raw or cooked. The "choke" or florets inside are removed. As soon as the blue florets show between the scales the head is too old for eating. Heads must be kept picked off to insure continuous supply. Although the Artichoke is perennial, the plant declines in vigor after it has borne two or three crops and new plants should be started every other year. Grow in rich, mellow, warm soil setting the plants 3

feet apart in rows, 5 feet apart; mulch the plants well over winter.

"Large French" Artichoke, the most satisfactory variety, a good producer, considered a delicacy on the city markets.

Pkt., 10c; Oz., \$1.25

Asparagus

History tells us that:

Asparagus is native to southern Europe and to Africa. It was the opinion of Pliny, the Roman Historian, that nature intended asparagus to grow wild in order that all might eat thereof, and that which grew naturally on the mountain side was considered the best.

It was grown in the gardens of the ancient Romans. The famous Ravenna asparagus is said to have been cultivated to such an extent that three of them weighed a pound.

The seeds taken from the berries of the asparagus, when dried and ground, are said to make a full-flavored coffee.

A perennial herb, cultivated for the succulent young shoots in the spring. It is native to Europe and Asia and has been in cultivation over 2,000 years. It is naturally a rugged, hardy plant that will live almost anywhere, but for the table we want thick, deliciously succulent shoots which are produced only from roots set in deep, very rich, mellow soil. It takes three years to establish a good asparagus bed, during this time frequent cultivation and heavy fertilization should be practiced. Do not cut any shoots for table use during this time. Start the plants in mellow, rich soil in spring in rows 16 inches apart and thin to three inches. Transplant the first fall to the permanent bed, setting the roots 6

or 7 inches deep in rows 5 to 6 feet apart and 2 feet apart in the rows. Practice clean cultivation, other crops can be grown between the rows the next two years. After that ridge loose well worked soil to a depth of a foot over the rows early each spring to induce long, tender, well-blanching shoots. Level again after the cutting season is over and continue clean cultivation. Each fall cut the matured stalks and remove them from the patch. Make a heavy application of Morcrop Fertilizer each fall and before hilling in the spring, spread half a pound of common salt per square yard over the rows.

Washington Giant Rustproof—Thick, heavy, rustless shoots, of rich, dark green color, heavy producer of exceptional flavor.

Pkt., 10c; Oz., 50c; ¼ lb., \$1.50

Conovers Colossal—Early, large white shoots, tender and delicious

Pkt., 10c; Oz., 20c; ¼ lb., 45c

Giant Argenteuil—A French sort having very thick green shoots with few scales and round heads.

Pkt., 10c; Oz., 20c; ¼ lb., 45c

Palmetto—Early and prolific, thin-pointed shoots, deep green.

Pkt., 10c; Oz., 20c; ¼ lb., 45c

Beans

The bean has held a distinguished place from remote times. Isidorus, the early encyclopedist, asserts it was the first food used by man. At any rate it is known to have been cultivated in Egypt, in Mesopotamia, and at a very early date in Greece and Italy. It is believed that the Aryans from Western Asia, brought the bean into Europe between 2500 and 2000 B. C. Early voyagers to the New World speak of beans and peas as being cultivated by the Indians in different parts of North and South America. The Algonquins had one and perhaps two varieties of pole beans. The Indian name for the bean means "to wind about." Bean flour was used by the Aztecs in Mexico.

Bush Beans

Bush Beans are easy to grow, and for that reason are more extensively grown than the pole varieties. They should not be planted until late in spring, after all danger of frost and chilly weather are past and the soil is thoroughly warmed. For succession plant at intervals of a week or two weeks until the middle of June.

The ordinary Bush Beans make no great demands for soil fertility. They do well on ordinary soil. Planting in hills of 3 or 4 every 16 inches, or, in drills 3 or 4 inches apart singly, are both good methods, the rows being 2 to 3 feet apart. Cover loosely 1 to 1½ inches deep. Keep the soil

well cultivated and pick the beans as soon as ready, clean picking promotes continuous production. Beans should not be cultivated when wet with dew or rain as that promotes the development of rust.

Prices All Varieties

Pkt., 15c; ½ lb., 20c; 1 lb., 40c;

10 lbs., \$3.50

(Postage extra)

Refugee 1000 to 1—Very productive, slender round pods of fine quality, medium late, in favor for canning.

Stringless Green Pod—Very early, round, meaty green pods, entirely stringless and of excellent quality.

Dwarf Horticultural—Medium length, green pods splashed with bright red, quite early, useful green or dried.

Broad Windsor—The old English "Broad Bean" used largely as a green-shelled bean, pods are borne upright at the axil of the leaf and stem.

Jones Stringless—Delicious, waxy yellow pods, very large, almost straight, plump and brittle, stringless and fine flavored, seeds are white.

Golden Wax, medium length, flat, broad, golden yellow pods, popular for market and home garden.

Golden Jersey Wax—An improvement on Golden Wax, pods are larger, more fleshy and if possible more brittle, waxy and stringless.

Black Wax—A black seeded exceptionally productive yellow waxy podded bean, pods are curved and well rounded.

Davis Kidney Wax—Pods are uniform in size, flat, very long, light yellow in color, stringless. Seed is white.

Pole Beans

A warm, rich, rather heavy soil is best, and they will stand heavy fertilization with a fertilizer like Morcrop-K in which phosphoric acid and potash predominates, as an excess of nitrogen will cause a too rank growth of foliage at the expense of beans and pods. The ground should be carefully prepared the same as for any other garden crop. Plant in hills 2 to 3 feet apart, in rows 4 feet apart, allowing four or five plants to the hill. Poles 7 to 8 feet long make the best supports. It is usually necessary to give them a little help to wind around the poles; they always wind from right to left. Cultivate and hoe frequently. Keep them picked clean if continuous supply is wanted.

Prices All Varieties

Pkt., 15c; ½ lb., 20c; 1 lb., 40c;

10 lbs., \$3.50

(Postage extra)

Kentucky Wonder—The pods are green, very long, surface wrinkled, brittle and without fibre, early and very prolific.

Lazy Wife—A popular late variety, pods green, seed white, kidney shaped, excellent dry shell beans. Superior as snaps.

Tall Horticultural—As a general purpose, late snap and green shell bean for home and market this variety is very popular.

Scarlet Runner—Desirable for both culinary and ornamental purposes, bears large scarlet flowers, followed by large, green pod snap beans.

Field Beans

Generally grown the same as Bush Beans except that the rows are placed far enough apart to allow for horse cultivation, and they are not harvested until ripe. They are frequently referred to as dry-shell beans on that account.

Prices All Varieties

Pkt., 15c; ½ lb., 20c; 1 lb., 40c;

10 lbs., \$3.50

(Postage extra)

Lady Washington—Earlier, larger and more productive than the Navy Bean. Especially adapted to the West.

Small White Navy—The universally popular "Navy Bean", excellent for baking as well as boiled or in soup.

Lima Beans

Tall lima beans will not usually succeed in the Northwest, but the dwarf limas are more or less successful. The culture is the same as for bush beans, except that they are even less hardy and should be planted a week later.

King of the Garden—Unsurpassed for production in places where "Limas" thrive, seeds and pods both large. The best Pole Lima.

Burpee's Bush Lima—A medium early bush variety bearing very large pods and beans of fine quality.

Prices All Varieties

Pkt., 15c; ½ lb., 20c; 1 lb., 40c;

10 lbs., \$3.50

(Postage extra)

Beets

(Table)

Like all root crops the beet needs a loose, light, rich soil which must be in the best condition of tillage. Only good commercial fertilizer like Morcrop, or well rotted manure should be used. Plant in rows 14 to 20 inches apart and thin to 3 inches in the row. Cover the seed one inch deep. Succession plantings should be made, the first planting one as early as the ground can be worked in the spring. They are often ready for use in 8 to 10 weeks. The round, or turnip varieties are grown for summer use. The long varieties are grown for winter use, and on the Pacific Coast

may be left in the ground all winter and pulled from time to time as needed.

Prices All Varieties

Pkt., 10c; Oz., 20c; ¼ lb., 45c;

1 lb., \$1.25

Early Wonder—An extra early heart-shaped, smooth beet of exceptional quality, color is rich crimson, faintly zoned, sweet and tender.

Crimson Globe—Almost globular in shape, perfectly smooth, medium sized, flesh is deep crimson, very delicious, medium early.

Crosby's Egyptian—Better than the old Egyptian from which it has been derived, early, smooth, tender, dark red flesh of finest quality.

Detroit Dark Red—Its uniform deep, rich color and globe shape make it a very popular market or mid-season maincrop variety, fine for canning.

Early Blood Turnip—A flat, turnip-shaped, early sort. The flesh is deep red, ringed pink, sweet and crisp.

Long Dark Red—A standard long, late variety, flesh is deep purplish red of good quality. An excellent keeper.

Brussels Sprouts

The requirements of this crop and its general treatment differ but little from those of cabbage and cauliflower. For fall use plant the seed in April and transplant in June. Set the plants 18 to 24 inches apart in the rows and allow at least 3 feet between the rows. As soon as the plants begin to crowd, the leaves should be broken off close to the stalk to give the sprouts room to develop. Only a tuft or rosette of leaves should be left at the top. West of the Cascades the plants are hardy enough to stand the winter and yield "sprouts" several weeks. For winter use the plants should be set during July and August. Frost really improves the quality and flavor of the Sprouts, making them especially popular during the winter months. The dwarf varieties are more closely set with sprouts which are also of larger size. Use Maggot-bate to prevent Root Maggots.

Dwarf Improved Sprouts—Two inches in diameter resembling miniature cabbages.

Pkt., 10c; Oz., 40c; ¼ lb., \$1.35

Broccoli

A winter species of cauliflower which reaches its highest state of perfection in western Oregon and Washington. Its cultivation and requirements are the same as cauliflower, except that it requires a little more room in the field, and that the plants are set out in July. The crop is ready for market during December, January and February. Use Maggot-bate to prevent Root Maggots. Morcrop used freely makes healthy plants and large heads.

St. Valentine—Large, firm heads of the finest quality, very early.

Pkt., 10c; Oz., \$1.50; ¼ lb., \$5.00

Large White French—The popular, well-known variety, medium early, very hardy.

Pkt., 10c; Oz., 90c; ¼ lb., \$3.00

Cabbage

The Egyptians honored the cabbage as a god and it was the first dish they touched at their repasts.

Cato, in his treatise on agriculture, written about 200 B. C., pronounced the cabbage "A panacea for the ills of man."

The old belief that the cabbage is an enemy of the grape and will cure intoxication is founded upon a Grecian legend.

Lycurgus, a prince of Thrace, destroyed the vineyard of Dionysius, the god of wine. He was bound to a vine as punishment, and the tears he shed over his lost liberty took root as cabbages.

The cabbage is an enemy to all other plants insofar that it draws to itself the substance of the soil and starves its neighbors.

Stealing cabbages may not be considered the gravest offense in the world, but remember that the Man in the Moon was sent there because he was caught stealing cabbage on the Holy Night of Christmas Eve.

Frequent cultivation is one of the best helps for cabbage, it has been aptly said by someone that it should be hoed every day.

One ounce of seed should produce 1,500 to 2,500 plants. Seed of the early varieties may be sown in seed bed in September and transplanted to cold frame to be wintered over, or may be sown in hotbed in January or February and the plants transplanted to cold frame when large enough.

Seed of the second early or summer varieties should be sown in seed bed or cold-frame early in April, and of the late or winter varieties in May or June. The plants will be greatly improved by transplanting once before setting out in the garden or field.

Plants of the early varieties should be set out as soon as the ground is in good condition to work. They should be set 16 to 24 inches apart in the rows and the rows should be two and one-half to three and one-half feet apart, according to whether to be cultivated with horse or by hand. These should be ready for use in June.

The second early varieties should be set out in May and should mature in July and August.

Late varieties, for winter use, are set out in July, 24 to 30 inches apart in rows three to three and one-half feet apart. They mature in October or November. In the

mild climate of the Pacific Coast they may be left in the ground until wanted for use during the winter. In colder climates they may be placed heads down, in trenches, and covered with sufficient straw and dirt to keep them from freezing.

The plants should always be set in the ground on a cool, wet day, or immediately after a heavy rain, while the ground is wet.

While Cabbage is a gross feeder, it endures much abuse, and thrives on a wide range of soils and conditions. Next to plenty of food, its greatest requisite is plenty of water, yet it requires good drainage and thrives best in cool weather and a moist atmosphere. Cabbage does not head hard in hot weather for that reason the early maturing sorts should be started early and the late varieties quite late in the spring, so as to avoid hot weather at heading time. Prices All Varieties

Pkt., 10c; Oz., 40c; ¼ lb., \$1.35;
1 lb., \$4.00

Late Varieties

Danish Ballhead—Unsurpassed for winter use, medium late maturing and a splendid keeper, heads are round, medium size and very hard, a fine Kraut cabbage.

Large Late Drumhead—The heads are large, solid and of good texture, flattened on top but very deep. Can be kept in good condition until spring, excellent shipper.

Premium Late Flat Dutch—A slow growing, sure heading popular late variety, large spreading outside leaves, very large flat heads, keeps well and of fine flavor.

Copenhagen Market—A very early, round, solid-headed variety, stems are short and the plants very sturdy, heads often weigh over 10 pounds.

Second Early Varieties

Lilly's Glory—The heads are of good size, almost perfectly round, extremely solid and heavy, deliciously tender and of finest quality. A splendid keeper.

Succession—As its name implies it is adapted for either summer, fall or winter use; large, round, slightly flattened heads, holds its "prime" a long time in the field.

Early Dwarf Flat Dutch—Valuable as a second early crop, heads are flattened, compact and of good size, best quality.

Early Varieties

Early Jersey Wakefield—The most popular extra early variety, heads are pointed, uniformly hard and of good quality, plants have but few outside leaves.

Early Winningstadt—A little later than Wakefield, heads are similar in shape but larger, and very hard with leaves tightly folded.

Miscellaneous Varieties

Drumhead Savoy—A large solid heading crumpled leaved variety with the rich flavor of cauliflower. Frost improves it.

Red Dutch—Has small heads of the finest quality for pickling, keeps good and heads are very hard, color deep purple-red.

Pe Tsai—Chinese or Celery Cabbage. Heads long like Cos Lettuce, hearts blanch white and crisp, fine for salads, plant in July.

Cauliflower

Select your richest land for Cauliflower, a strong loam is best, plenty of fertilizer well incorporated with the soil and the latter brought into the highest state of tilth.

Cultivation and soil should be very much the same as for cabbage, but it is more difficult to grow. To produce perfect heads cauliflower requires a cool, moist season and a rich, moist, loamy soil. In the Sound country cauliflower does exceedingly well in the average season. For a spring or early summer crop sow in March or early in April, in hotbed, and transplant to a cold frame when sufficiently large, and to the open ground as soon as danger of hard freezing is over. For a late crop sow at the same time as for late cabbage and treat in the same manner. With the early cauliflower, when the heads begin to form, the leaves should be brought over and tied around the heads to blanch them. The heads should be cut for use when the "curl" is very compact or hard, as they soon become tough and bitter after they open and separate into branches. Best results will be obtained by planting either very early or very late, in order to avoid the hot mid-summer season when heads are being formed. Fertilize with Morcrop Fertilizer. Use Maggotbate to prevent root maggots.

The principal requirements of the crop are a high degree of soil fertility, perpetual moisture with proper drainage, and protection from excess heat. Start the plants in a seed bed and transplant while quite young to a well prepared field. Set the plants 2 to 2½ feet apart in rows 3 to 4 feet apart. Stir the soil frequently.

Early Varieties

Early Alba—A large, compact heading, extra early type, a sure producer of snow-white heads of excellent flavor and quality.

Pkt., 25c; ¼ Oz., 1.20; 1 Oz., \$3.50

Snowball—The standard early sort, heads medium size, but compact, uniform, white and nicely flavored.

Pkt., 10c; ¼ Oz., 75c; 1 Oz., \$2.50

Late Varieties

Veitch's Autumn Giant—A large, late variety with quite compact, white heads, known as California Wonder.

Pkt., 10c; ¼ Oz., 35c; 1 Oz., \$1.25

Large Late Algiers—A valuable sure-heading sort that is popular with market gardeners, the large up-right leaves protect the tender heads against frosts.

Pkt., 10c; ¼ Oz., 35c; 1 Oz., \$1.25

Danish Dry Weather—Especially adapted to dry locations, but also an excellent variety for good cauliflower districts, a sure header.

Pkt., 25c; ¼ Oz., \$1.20; 1 Oz., \$3.50

Carrot

The Carrot requires a loose, friable, warm soil, in the very best mechanical condition, this needs to be liberally fertilized with Morcrop or well-rotted stable manure. The seed should be sown as soon as the ground is warm and dry enough, in rows 1 to 2 feet apart. As the seed germinates slowly the land should be free from weeds. Thin when large enough, to stand 2 to 3 inches apart. Careful, clean, cultivation is required, and drought must be avoided if large, succulent crops are wanted. Young carrots find a ready market all summer, and the matured roots can be stored for winter, or in climates like western Washington and Oregon, can be left in the ground until wanted for use. The seed is rather slow to germinate.

Prices All Varieties

Pkt., 10c; Oz., 20c; ¼ lb., 50c; 1 lb., \$1.50

Golden Half Long—By far the best carrot for market and home use, roots are half-long, smooth, of uniform orange-red color and exceptionally sweet.

Short Horn—Best for early use, fine for forcing, roots are short (2 to 3 inches), tops small, they grow very quickly.

Chantenay or Model—A stump-rooted or half-long sort, broad at the shoulder, tapers to a blunt point, fine grain, coreless, tender and medium early.

Danver's Half Long—An especially hardy sort, popular with gardeners who grow large fields of carrots; smooth, sweet, well colored, second early.

Oxheart or Guerande—Desirable in hard or shallow soils, roots are thick and short, bright orange in color, fine grained.

Improved Long Orange—A selected strain of the popular long-rooted type, roots are uniformly thick, tapering to a point, valuable for both table and stock, late.

Stock Carrot

Culture same as for table use except that more space is required in the field. They keep well and make excellent stock feed.

Prices All Varieties

Pkt., 10c; Oz., 20c; ¼ lb., 45c; 1 lb., \$1.25

Large White Mastodon—Creamy white in color, of immense size and often producing 25 tons per acre.

Improved Short White—Roots 7 to 9 inches long, smooth, heavy at the shoulder, and very productive.

White Belgian—Smooth, well shaped, tapered roots, greenish-white in color, heavy yielder.

Celeriac

An off-shoot of the Celery species, producing an edible root, instead of edible stalks. Just how long it has been in cultivation is unknown, but it has been traced beyond the middle of the 17th century.

In general the culture is the same as for celery, except that no blanching is required. Start the plants in a hotbed or plantbed and transplant once before setting out to the permanent location. The seed germinates slowly and must be kept well watered. In the garden the rows should be two feet apart and the plants six to eight inches apart. Aside from frequent tillage, Celeriac requires but little attention. The principal use of Celeriac is for flavoring soups and stews, but it is also served in several ways. It may be boiled like Cauliflower, or served in a salad with beets and turnips.

Large Prague—Good sized, smooth round roots, turnip shaped.

Pkt., 10c; Oz., 35c; $\frac{1}{4}$ lb., \$1.20.

Chervil

The cultivation of Curled or Salad Chervil presents no difficulties. The leaves are ready to use in six to ten weeks from planting and any good garden soil is congenial. It thrives best during the cooler months of the year and likes moisture. The leaves are very aromatic and are used like parsley, which they resemble.

Pkt., 10c; Oz., 25c; $\frac{1}{4}$ lb., 80c.

Celery

Sow the seed in hotbed, cold frame or seed bed early in spring. Transplanting once or twice before setting the plants in the garden will be very beneficial. The tops should be clipped off to induce stockiness, and when transplanting, the ends of the roots should be cut off.

Celery requires a deep, very rich, moist soil. Fresh stable manure is liable to make the celery coarse, stringy, and of inferior flavor, but well-rotted manure may be used if applied some time before planting.

The plants may be set in the garden after some early harvested crop has been removed. They should be set six inches apart in rows three feet apart. The writer has seen celery planted in rows 16 inches apart on land in the highest state of cultivation, tilth and moisture where no blanching was required, the growth being so dense as to automatically exclude the light. They should be given frequent cultivation.

When the plants have attained considerable size, the leaves should be drawn up and a little soil compacted about the base of the plants to hold them upright.

There are several ways of blanching the plants, but the favorite method is with boards. When the plants are a little more than a foot high, set twelve-inch boards on edge close to the plants on both sides of the row. Let the tops of the boards lean together against the plants so that they will be only two or three inches apart. Hold the boards in this position by nailing across the tops. A few of the leaves will show above the boards. The foliage will soon fill the space, excluding the light, and the stalks will be blanched in ten to twenty days.

If the plants are blanched with earth, care must be taken that the crowns do not become filled.

Celery may be kept for winter use by banking with earth and covering the tops with leaves or straw to keep it from freezing. Or it may be dug and removed to a cellar, cold frame, vacant hotbed, or pit, and reset close together with the roots bedded in earth. While in storage it should be kept as cool as possible without freezing.

The seed is slow to germinate, and the seed bed must be in perfect condition. One ounce of seed will produce about three thousand plants.

Fertilize freely with Morcrop and side dress with Nitrate of Soda and Sulphate of Potash.

Paris Golden Yellow—Semi-dwarf, has numerous stalks, heavily ribbed, of golden yellow color, very crisp and tender, very early and practically self-blanching.

Pkt., 10c; Oz., \$1.35; $\frac{1}{4}$ lb., \$4.00;
Lb., \$12.00.

Silver Plume—Early, attractive in appearance, blanches quickly, medium in size, hearts are pure white, brittle, free from stringiness and of fine flavor

Pkt., 10c; Oz., 50c; $\frac{1}{4}$ lb., \$1.50; Lb., \$4.00

Golden Self Blanching—The standard early self-blanching, leaves yellow, easy to grow.

Pkt., 10c; Oz., 50c; $\frac{1}{4}$ lb., \$1.50;
Lb., \$4.00.

Giant White Winter—Unequaled as a late or winter celery, requires blanching with earth or boards, grows very tall, on the Coast can be left in the garden until wanted, white, brittle, and fine flavored.

Pkt., 10c; Oz., 50c; $\frac{1}{4}$ lb., \$1.50; Lb., \$4.00

Chicory

A native of Europe, and familiar to many as a weed. Used principally as a potherb, a salad plant, and as an adulterant of coffee. Succeeds where other rootcrops thrive and requires practically the same cultural attention as carrots and parsnips. The young, tender roots are boiled and served with butter and seasoning. As a potherb, the young leaves are equal to those of dandelion. They are cut when six or eight inches

long and boiled (in two waters to remove the bitter taste), and served like spinach. For salad, the matured roots are dug and trimmed, removed to the vegetable cellar, packed in moist earth, quite close together with the crowns protruding about an inch. Place an inverted box over them and in three or four weeks you have an abundance of fine white leaves. Cut when about six inches long and use as a salad, boil like kale, or cut up like cold slaw. The roots when matured, sliced and dried have a strong coffee flavor and they are often used to adulterate that article.

Pkt., 10c; Oz., 40c; $\frac{1}{4}$ lb., \$1.35;
Lb., \$4.00.

Collard

A non-heading form of cabbage grown extensively in the south for greens. Culture is the same as for cabbage and they are best after being touched with frost. Not adapted to the north.

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 65c.

Corn Salad

or Feticus

Known also as Lambs Lettuce, it is a native of Europe. Sow the seed in October or November like winter spinach or very early in the spring like lettuce. Likes an abundance of water, and light, rich, well worked soil. Matures in 60 to 65 days during growing weather and makes a mild salad (best when blanched) or can be used as a potherb like spinach.

Pkt., 10c; Oz., 30c; $\frac{1}{4}$ lb., \$1.00;
Lb., \$3.00.

Sweet Corn

Corn has been grown in America since prehistoric times, having been the principal cereal in the ration of the Indians. The principal kinds of corn now in cultivation are, Sweet Corn, Pop Corn and Field Corn, all of which are important crops in all but the extreme southern states. All the varieties are tender and should not be planted until danger from frost has passed. About April 15th to 20th is considered safe planting time for sweet corn, although earlier planting is well worth a trial for a portion of the crop.

Corn requires a rich, well prepared seed bed. Ten to fifteen sacks of Morcrop per acre is a profitable investment. Work it into the topsoil before planting. Plant the seed in drills three feet apart and thin to a single stalk every foot in the rows, or five or six kernels may be planted in hills, three feet apart each way, and thinned to three plants in each hill. Cultivation should be for the purpose of conserving the soil moisture, as well as to kill weeds, and should be frequent. Corn develops an extensive, shallow, root system for which

reason it is necessary to make each succeeding cultivation shallower than the last, to avoid damaging the root system toward the latter part of the season. Keep the surface covered with a dust mulch and you have an ideal growing condition for corn. Do not allow the suckers (side shoots) to develop, if you want large, uniform ears.

Price all varieties (postage extra).

Pkt., 15c; $\frac{1}{2}$ lb., 20c; 1 lb., 40c;
10 lbs, \$3.50.

Golden Giant—Produces large ears of very sweet, tender, deep golden corn, the flavor is wonderful and the yield large, should be grown in every garden.

Golden Bantam—Very early, sweet and delicious, the ears are short but thickly set with plump, creamy yellow kernels which turn golden as it ripens, very popular.

Jack Frost—The earliest white sweet corn especially adapted to Northwest conditions, kernels are large, of delicate flavor and melting tenderness, remains tender a long time.

Country Gentlemen—A splendid late variety, the cob is small but densely crowded with irregular rows of deep, slender white kernels of excellent quality.

Stowell's Evergreen—An old favorite late, white variety, ears are large, kernels tender and sugary and remains a long time in condition for table use

Early Minnesota—A standard second early variety of white corn, kernels are broad, sweet and tender, ears long and thickly set with ten or twelve rows of kernels.

Field Corn

The earlier varieties of field corn are best adapted to Northwest conditions, planting in drills gives the greatest yields and the best plan is to plant rather early and take a chance on a spring frost rather than to chance freezing in the fall. Fertilize freely and cultivate often. The best yields are obtained if plenty of room is given the rows.

Price per lb., 10c (postage extra).

Quantity price on application.

Minnesota No. 13—The best yellow field corn, adapted to the Northwest where a large, early maturing dent variety is wanted, yields heavy, produces much fodder and is a dependable ripener.

Pride of the North—Another early maturing yellow dent corn recommended for the Northwest by the Experiment Stations, kernels are not so deep as Minnesota No. 13, and it does not ripen quite as early.

King Phillip—An early maturing variety; the kernels are slightly dented and mature hard and flinty, stalks are large, among the earliest to mature.

Sanford's White Flint—A reliable, early, large, white flint corn.

Cucumber

Cucumber plants are very tender, will not endure frost or chilly weather, and should not be planted out of doors until late in spring after the weather is thoroughly settled and the soil is warm. They require a light, rich, warm, porous soil, very heavily fertilized. It is difficult in the Puget Sound country to make them mature all their fruit before being killed by frost in the fall, and they must be forced in every way possible. The plants may be started in berry boxes or in inverted pieces of sod in the kitchen window or in the hot-bed, planting a half dozen or more seeds in each box or sod the latter part of April. By the time that they should be planted out of doors they will have attained a height of eight or ten inches and will be about ready to vine. Set in the garden a little deeper than they stood in the boxes, removing the boxes without disturbing the soil around the roots. Fertilize generously with Morcrop to hasten the time of fruiting. After danger from beetles is past thin to three plants to the hill.

There are many methods of planting. Some plant in hills six feet apart each way; others plant in hills six by two or three feet, and others in drills six feet apart; thinning the plants to one foot apart in the rows. We prefer the latter method. A row of beans or peas may be planted between each two rows of cucumbers. They will protect the cucumbers and will be removed before the space is required by them. The seed should be planted about one inch deep.

Pick all of the cucumbers before they begin to mature, for as soon as the vines begin to mature fruit they cease to produce.

Prices All Varieties

Pkt., 10c; Oz. 20c; $\frac{1}{4}$ lb., 65c; Lb., \$2.00.

Table Varieties

Pride of the Pacific—A highly bred strain of White Spine, vines are hardy, vigorous and productive, fruit is smooth, symmetrical, deep green color, flesh sparkling white, crisp and deliciously flavored.

Davis Perfect—Large and uniform in shape, the numerous fruits are smooth and well colored, the flesh for quality and flavor is hard to beat.

Long Green—For slicing the long, firm, crisp fruits are very desirable, they are very dark green and average a foot in length, flesh white and firm.

White Spine—One of the best sorts for table use, an early vigorous cropper, fruit is covered with fine white spines, flesh of excellent flavor and quality.

Pickling Varieties

Boston Pickling—Medium sized, bright green fruits are borne in great abundance, unexcelled for pickles.

Early Frame—Also called "Short Green" is an early, bright cucumber of medium size, used for both pickling and slicing, very productive.

Lemon Cucumber—Shape and color resembles a lemon, has distinctive flavor and lacks the bitterness common to the cucumber.

Pkt., 10c; Oz., 25c; $\frac{1}{4}$ lb., 85c; lb., \$2.50.

Improved Telegraph—A special variety for frame or greenhouse culture, smooth fruits 18 to 20 inches long, deep color; three or four are produced at each joint, highest quality flesh which remains stiff after cutting.

Special Price per Packet, 25c.

Cress

or Pepper Grass

Its leaves have the pleasant pungency of Water Cress, and may be used more freely as a condiment, to be served with salads, or for garnishing. The seed sprouts very quickly and can be planted very early in the spring. It can be cut repeatedly but for best results frequent plantings should be made. Any good garden soil will do. Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 50c; Lb., \$1.50.

Water Cress

Its medicinal properties have made it a favorite salad plant for ages. Easily grown along ditches, pools and streams. Plants can be started in a well-watered trench in the garden and transplanted. Can be grown to maturity in tubs if covered with water which is changed frequently.

We offer a distinctive variety of cress with small oval leaves, which are used for salad. It must be grown in shallow water and the seed is scattered along the banks of streams or ponds.

Pkt., 10c; Oz., 60c.

Egg Plant

The curious, but valuable vegetable, came to us from the East Indies, and has always been considered a plant for the tropics or at least only the warmer sections of the United States. They thrive in certain parts of the Pacific Northwest and require the same cultural attention as tomatoes. The soil should be rich, warm and mellow. Nothing is to be gained by pruning the plants.

New York Improved—Very productive; the fruits are large, nearly round, dark purple, free of thorns and of excellent quality.

Pkt., 10c; Oz., 75c; $\frac{1}{4}$ lb., \$2.50.

Black Pekin—An early variety with fruits nearly as large as the later sorts. The fruit is nearly round, the skin smooth, black and glossy.

Pkt., 10c; Oz., 75c; $\frac{1}{4}$ lb., \$2.50.

Endive

or Escarolle

A fall and winter salad plant much relished by those who know it. Transplanting is done in July or August and when plants have reached full development they are blanched, this takes two to four weeks. Blanching is easily done by placing two boards over the row in an inverted V shape.

Batavian Broad Leaved—The leaves are broad, twisted and waved, deep green, with thick, white midribs. The inner leaves form a clustering head which blanches to a beautiful creamy white and is crisp and tender.

Pkt., 10c; Oz., 20c; ¼ lb., 65c.

Green Curled Endive—A hardy, vigorous variety, bright, deep green leaves usually tinged with rose, blanching to a deep cream color.

Pkt., 10c; Oz., 20c; ¼ lb., 65c.

Garlic

A hardy perennial, bulbous plant, closely allied to the onion. It is native to southern Europe. Grown mostly from bulbs or sets. The bulbs are composed of several parts called cloves; these are separated when used for planting. They mature in summer and early fall and where the ground is very rich it may be necessary to break over the tops to help develop large bulbs. The foreign population who come from southern Europe esteem Garlic highly for cookery. Its principal use being for flavoring.

Per lb., 25c; quantity price on application.

Kohl Rabi

The edible portion is the peculiar swollen stem just above the ground. The plant belongs to the cabbage family, but the vegetable resembles a turnip and like turnip should be used while young and tender. If wanted for winter use they should be planted in August. Can be stored like turnip. They grow best in cool weather, and in soil that has been enriched with Morcrop.

Early White Vienna—Combining somewhat the flavor of turnips and cabbage. Large enough to be used in ten or twelve weeks from time of sowing.

Pkt., 10c; Oz., 35c; ¼ lb., \$1.00.

Herbs

Grown for their medicinal, aromatic and seasoning qualities and for garnishing. Only the most easy to grow are listed. They are to be started from seed in the spring as soon as the ground is warm. The varieties marked (*) are perennials and are

hardy in this climate, while the others are annuals and are planted each year.

Anise—Used for flavoring and garnishing. Pkt., 10c; Oz., 40c.

Caraway—Seeds used for flavoring, oil for medicine. Pkt., 10c; Oz., 50c.

***Catnip**—Leaves used for seasoning, good bee pasture. Pkt., 10c; Oz., \$1.25.

***Dill**—Flavoring pickles and medicinal tea. Pkt., 10c; Oz., 20c.

***Horehound**—Seasoning and lung medicine. Pkt., 10c; Oz., 40c.

***Lavender**—Leaves for seasoning, flowers for perfume. Pkt., 10c; Oz., 65c.

***Rosemary**—Leaves for seasoning, tea and oil for medicine. Pkt., 10c; Oz., 75c.

Sage—Leaves used for seasoning dressings. Pkt., 10c; Oz., 85c.

Summer Savory—Leaves and flowers for flavoring. Pkt., 10c; Oz., 65c.

Sweet Fennel—Leaves for fish sauces, tea for colic. Pkt., 10c; Oz., 30c.

Sweet Marjoram—Leaves and shoots for seasoning. Pkt., 10c; Oz., 80c.

Tansy—Used to season puddings and for medicine. Pkt., 10c; Oz., 75c.

***Thyme**—Leaves for seasoning, tea for headaches. Pkt., 10c; Oz., 90c.

Wormwood—Used to flavor liquors, and for medicine. Pkt., 10c; Oz., 75c.

Kale

or Borecole

Grown for supplying greens during the fall, winter and spring; also used for garnishing. Of all the cabbage family this is the most tender and delicious. For winter use, sow in September in drills eighteen inches apart, covering the seed one inch deep, and thin to twelve inches apart in the rows. The young plants which are thinned out, may be used for greens like spinach. Plants are hardy and are left in the ground until wanted for use. Frost improves the quality. For summer use plant early in spring. The soil should be very rich.

Fertilize well with Morcrop and cultivate and handle like cabbage.

Prices All Varieties

Pkt., 10c; Oz., 20c; ¼ lb., 65c; Lb., \$2.00.

Emerald Isle—A grand, finely curled, winter variety, 2½ feet tall, improved by frost.

Tall Scotch—Grows four feet high, large, plume-like green leaves, deeply cut, fine curled edges.

Dwarf Green—Vigorous, dwarf, spreading habit, large bluish leaves with frilled edges.

Thousand Headed Kale

Supplies Green Food for Cows, Sheep, Hogs and Poultry During Winter.

Thousand Headed Kale or Cow Kale as it is sometimes called is one of the most

useful crops for the Pacific Coast. It belongs to the cabbage family, is succulent and nutritious and is unequalled as green food for stock, especially poultry and cows. West of the Cascade Mountains it is left in the ground all winter and cut as required for feeding.

It is not only an economical food but by supplying succulent green food will keep stock in perfect health. No poultryman can afford to be without his patch of Kale; it answers the question of green food for fall and winter.

Lilly's Thousand Headed Kale—The abundant, enormously large, cabbage-like leaves are sweet and tender.
Pkt., 10c; Oz., 15c; ¼ lb., 25c; lb. 60c.

Marrow Kale or "Chou Moellier"

The plant is not so hardy as Thousand Headed Kale, but is most valuable for green feed in fall and early winter. The culture is the same as for Kale and Cabbage. Besides its heavy foliage it produces immense sized stalks which are edible and relished by stock.

White Stemmed is the heaviest producing strain of Chou Moellier for this section.
Pkt., 10c; Oz., 20c; ¼ lb., 65c; Lb., \$2.00.

Head Lettuce

For early crop sow the seed in hotbed in February or early March; transplant the seedlings to cold frames or flats, and when the ground is warm enough transplant to the garden in rows a foot apart and eight to twelve inches apart in the rows.

For general crop, sow when ground is in good condition to work in spring in rows a foot apart and thin the plants to six or eight inches apart. For succession sow at intervals of two or three weeks. The plants which are thinned out may be transplanted to other rows.

Some use only a part of the leaves from the plants, allowing the plants to continue to grow; or allow them to grow thickly in the rows and thin as wanted for use; but it is much better to thin the plants when they are small, allow them to form heads, and use the entire heads.

Lettuce does best in the cool weather in spring and fall. That grown during the hot weather in summer should be protected from the sun, or planted in the shade of some taller crop. It is best when grown quickly, and Lilly's Morcrop is the favorite fertilizer for lettuce in the growing sections. A rich, warm, sandy loam soil is best.

The seed may be sown in fall and the plants wintered over in cold frames, like early cabbages.

New York or Wonderful—Outer leaves are large, numerous and well curled, heads are creamy white, crisp, tender and delicious. The most popular variety in America.

Pkt., 10c; Oz., 35c; ¼ lb., \$1.15;
Lb., \$3.50.

Prices All Other Varieties
Pkt., 10c; Oz., 25c; ¼ lb., 85c; Lb., \$2.50.

Delicious—Very early, compact heads, fine quality and flavor, leaves yellowish green.

May King—Withstands cold, damp weather, heads early, and of fine quality.

Nonpareil Hanson—A late, large, compact, cabbage-like heading sort that is very popular.

Iceberg—A decidedly crisp variety, spreading leaves, but hard curled heads, fine flavor.

Paris White Cos—A Romaine type of head lettuce, heads are tall and tightly folded.

Looseleaf Lettuce

The non-heading type of lettuce is useful principally because it is hardy enough to be planted very early in the spring. It grows rapidly and requires no special care. If cut above the crown it will come again, and therefore, provides an enormous quantity of delicious, tender greens before the weather is warm enough for other vegetables. Usually sown in drills or beds where it is to remain.

Prices All Varieties
Pkt., 10c; Oz., 25c; ¼ lb., 85c; Lb., \$2.50.

Grand Rapids—Quick growing and stands shipping well, popular for greenhouse forcing.

Early Curled Simpson—Light green leaves muchly curled and blistered, crisp and sweet.

Lilly's Forcing—Quick growing, crimped, light green leaves, excellent forer, early outdoors.

Prizehead—Large clustering, savoyed leaves, tinged with red, crisp, tender and sweet.

Leek

The Leek, with its Cymric colors of white and green, is extensively cultivated in Wales. On the first of March the Welsh wear them in honor of St. David, their patron saint.

St. David, being a devout and frugal man, is believed to have lived mainly on leeks that grew wild in his country. According to tradition, when the inhabitants of Wales gathered to defend themselves against the early Saxon, St. David ordered his soldiers to put leeks in their caps so that when fighting at close range the Welsh might not only spread terror among

the Saxons by charging the air with this appalling smell, but also know one another.

In Eastern countries, the leek is the emblem of humility, representing as it does, the food of the poor from time immemorial.

The seed is usually sown in the bottom of a trench and after thinning the plants are hilled up as they grow. A thick fleshy stem is formed which should be blanched with earth before using. It belongs to the onion family, but does not form a true bulb, however, the stem is uniformly thick throughout. Can be stored for winter use like celery.

Musselburg—An improved variety growing to a very large size, with broad leaves spreading like a fan.

Pkt., 10c; Oz., 35c; $\frac{1}{4}$ lb., \$1.15.

American Flag—Large, sweet and very popular with gardeners.

Pkt., 10c; Oz., 35c; $\frac{1}{4}$ lb., \$1.15.

Mangel or Stock Beet

Culture is very similar to table beets except that the rows are planted from sixteen to twenty-four inches apart to allow for horse cultivation and because the roots attain enormous size they are thinned to stand six to twelve inches apart. Plant during late May or early June on well prepared, seedbed that has been lightly fertilized. It pays to grow Mangels on your best piece of ground. Keep well cultivated and free from weeds. The matured roots will not stand freezing and must be stored where they can be protected.

Prices All Varieties

Pkt., 10c; $\frac{1}{2}$ lb., 20c; 1 lb., 40c;
10 lbs., \$4.00.

Lilly's Sludstrup—Long, tapered, smooth, of immense size, reddish yellow color, grows well above the ground, remarkable yielder.

Giant Intermediate—Roots large, medium length, neck small, flesh white, a big cropper.

Long Red—Very long, large red skinned roots, flesh tinged red, grows well above ground.

Half Sugar—Good sized white roots, combining size of Mangel with sweetness of Sugar Beets.

Golden Tankard—Short, tankard shaped roots of immense size, flesh yellow.

Yellow Globe—Has very small top and grows on top of the ground, yellow.

Citron

Used exclusively for preserves and pickles. Grown the same as watermelon.

Red Seeded—Small round fruits distinctly striped and mottled, flesh white, late.

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb. 50c; Lb., \$1.50.

Mustard

As a culinary vegetable, Mustard is used mostly for greens for which purpose the large, succulent, basal leaves are used. These develop best in the early spring and during cool fall weather. Any rich garden soil is suitable for its culture.

Prices Both Varieties

Pkt., 10c; Oz., 15c; $\frac{1}{4}$ lb., 35c; lb., \$1.00.

Southern Curled—Large, crimped, light green leaves, hardy and vigorous.

White English—Dark green, small, smooth leaves deeply cut, mild and tender.

Muskmelon

or Cantaloupe

The muskmelon is a long season crop, and when grown west of the Cascade Mountains conditions must be favorable and they must be encouraged in every way possible to insure success. The soil must be a warm, sandy loam with an abundance of well-rotted manure and commercial fertilizers.

For an early crop, or for main crop in other than the most favorable localities, the plants should be started in berry boxes or on inverted sods.

In warmer localities the seed may be planted, when weather is settled and the soil is thoroughly warmed in spring, in hills six feet apart each way, eight or ten seeds in each hill and thinned to four plants to the hill. Or the seed may be sown in drills and the plants thinned to eighteen to twenty-four inches apart when they have become thoroughly established. Rows of short season crops may be planted between the rows of muskmelons.

Prices All Varieties

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 50c; lb., \$1.50.

Pollock 10-25—Early, closely netted, very small seed cavity, thick luscious flesh of salmon tint, excellent shipper and big yielder.

Improved Rocky Ford—Small oval shaped fruits, flesh green and thick, rind thin, netted yellow.

Burrells Gem—Dark green with thin skin, flesh thick, salmon colored, very delicious.

Extra Early Hackensack—Quite large round fruit, deeply ribbed and netted, flesh pale green.

Osage or Millers Cream—Medium early, smooth skinned, deeply ribbed, flesh orange colored and very thick.

Honey Dew—Smooth oval fruits, rind almost white, green flesh with a pleasing sweet flavor.

Watermelon

The cultivation of the watermelon is practically the same as for the muskmelon, except that the plants grow larger and require more room. They should be set in hills ten feet apart each way, or in drills ten feet apart and the plants thinned to three feet apart in the rows.

Prices All Varieties

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 50c; Lb., \$1.50.

Ice Cream—Oblong, dark green skin; the flesh is very sweet and deep pink.

Georgia Rattlesnake—Very large and long, skin striped and blotched, flesh bright scarlet.

Kleckley's Sweet—Very thin rind, medium size, oval, slightly mottled, flesh bright red.

Sweet as Honey—Early, oblong, dark green, bright scarlet flesh, clear to the skin, solid core.

Florida Favorite—Very large, dark green fruits, skin mottled, flesh deep red, seed white.

Tom Watson—The best shipper and maincrop melon, flesh rich red, seed white, skin dark green.

Mushroom

There is nothing mysterious about mushroom culture. Well prepared beds, good spawn, properly controlled, moisture and ventilation are the only essentials for indoor culture. The average cellar provides the last three of these. The temperature should be between 53 degrees F. and 60 degrees F., but can be as high as 75 degrees F. at spawning time; after that cold is less injurious than heat. Horse manure composted with straw is the best material for beds. Break the bricks of commercial spawn into eight to ten pieces, place these a foot apart and two inches below the surface; after ten days case the bed by covering with one inch of screened loam (not clay or sand). The mushrooms should appear in five to ten weeks and the period of production lasts about three months. Keep the cellar moist by sprinkling the walls, if necessary to water the bed do so after picking. Ventilation should be gradual as direct draughts are harmful.

A special leaflet on mushroom culture free.

Lambert's Pure Culture Mushroom Spawn is produced by a new system of selection and inoculation. The pure cultures are taken direct from selected specimens and produce mushrooms of the finest quality of uniform variety and color. In bricks weighing about one and one-quarter pounds. One brick is sufficient to spawn nine square feet of bed. Brick, 40c; 5 Bricks, \$1.75, postage extra.

Okra

or Gumbo

Introduced into the United States from Africa, and cultivated for its fruit pods, which are used in soups, catsup, stews, etc. It gives body to these dishes, and imparts a peculiar flavor, a taste for which, however, is easily acquired by most people. The plants are not easily transplanted and should be started in pots to facilitate moving. Set two to three feet apart in good, warm garden soil and keep the pods picked off clean if continuous production is wanted.

Dwarf Green produces long green pods abundantly, very tender while young. Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 45c; Lb., \$1.25.

Onion

The Onion was the symbol of the universe to the ancient Egyptians. In their belief each successive layer of this bulb corresponded to the successive heavens and hells that encircled the earth.

For this reason, perhaps, some early writers claim the onion was held sacred and forbidden to be eaten. Writers of later times generally agree that it was only the priests who were forbidden to eat the onion; and that the onion was eaten raw as well as cooked by persons of both the higher and lower classes. It is usually to be found among the offerings presented to the gods, both in the tombs and temples.

For young onions, sets are generally planted in rows about 12 to 14 inches apart and about one and a half inches apart in the row. This will give very early green onions.

For dried onions, seed is sown, and it requires a rich, well-drained loam. No other soil should be used if it can possibly be avoided. The land should be very rich and it is absolutely necessary that it should have raised a hoed crop the previous season. It is a mistake to attempt to grow onions on weedy or rundown land. To get the best results a heavy top dressing of well-rotted barnyard manure should be well worked into the soil. After this Morcrop Fertilizer containing a large proportion of potash should be used. This should be sown broadcast at the rate of 1,000 pounds per acre.

The cost of growing and cultivating onions is very high and it must be borne in mind that it costs no more to cultivate a crop that yields 800 bushels per acre than it does to cultivate a crop that yields only 300 bushels. When land is in good condition onions may be grown on it from year to year. Seed should be sown as early in the spring as the land can be worked. If intended for hand cultivation, sow in rows 12 to 14 inches apart, and if for horse

cultivation about 30 inches apart. It requires from three to six pounds of seed per acre.

For those who intend raising many onions it will be money well spent to get one of the many good books published in reference to the production of this crop. It will pay to buy the best seed and from reliable sources, as onion seed loses its vitality after the first year.

Prizetaker—Bright clear straw color, uniform large size and perfect shape, flesh white and fine grained, keeps and ships well.

Pkt., 10c.; Oz., 65; $\frac{1}{4}$ lb., \$2.25;
Lb. \$6.50.

Yellow Globe Danvers—Globe shaped, creamy white, crisp, mild flavored, solid flesh.

Pkt., 10c; Oz., 55c; $\frac{1}{4}$ lb., \$1.85;
Lb., \$5.50.

Australian Brown—Early, medium size, almost round, good keeper, brown skin, mild.

Pkt., 10c; Oz., 50c; $\frac{1}{4}$ lb., \$1.50;
Lb., \$5.00.

Large Red Wethersfield—Very large, flattened bulb, purplish red skin, purple tinged white flesh, strong flavored, keeps well.

Pkt., 10c; Oz., 55c; $\frac{1}{4}$ lb., \$1.85;
Lb., \$5.50.

Longkeeper—Marvelous keeping qualities, globe shaped, yellow skin, mild flavor, medium size.

Pkt., 10c; Oz., 50c; $\frac{1}{4}$ lb., \$1.50;
Lb., \$5.00.

White Queen—Small, best for pickles and green onions, very crisp, waxy white, mild.

Pkt., 10c; Oz., 55c; $\frac{1}{4}$ lb., \$1.85;
Lb., \$5.50.

White Portugal—Popular medium sized, good for fall and winter planting, silvery white.

Pkt., 10c; Oz., 65c; $\frac{1}{4}$ lb., \$2.25;
Lb., \$6.50.

Southport White Globe—Mild flavored, fine grained, crisp, large, snowy white in color.

Pkt., 10c; Oz., 65c; $\frac{1}{4}$ lb., \$2.25;
Lb., \$6.50.

Sweet Spanish—Enormously large and exceptionally mild flavored, much used for sandwiches, skin pale yellow, flesh waxy white.

Pkt., 20c; Oz., 75c; $\frac{1}{4}$ lb., \$2.75;
Lb., \$8.00.

Onion Sets

Lilly's Onion Sets are northern grown, hardy, handsome, small and of uniform size. We grow only the most suitable varieties which have proven to give best results in our section. These sets if planted very early will produce green onions early in

summer, much earlier than they can be produced from seed. They will also produce mature onions.

Pound, 20c; quantity price on application.

Parsley

The seed of parsley germinates very slowly and it is well to soak the seed a day before planting. Radishes are often sown with parsley to mark the rows. Be sure to firm the soil well over the seed; this hastens germination. In our mild climate on the Coast parsley lives outside all winter. Used mostly for seasoning and garnishing.

Prices Both Varieties

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 50c; Lb., \$1.50.

Champion Moss Curled—Compact growing, hardy, vigorous, with leaves finely curled, excellent flavor.

Hamburg—A turnip rooted sort, the leaves are used for garnishing, the roots for salads and soups.

Pepper

Strictly a hot climate vegetable and not well adapted to the Coast section of the Northwest. Plants are started in hotbeds and transplanted after the weather has settled. Frequent cultivation, plenty of moisture, liberal applications of Morcrop Fertilizer are great factors in their successful culture.

Prices All Varieties

Pkt., 10c; Oz., 80c; $\frac{1}{4}$ lb., \$2.50;
Lb., \$8.00.

Bell or Bull Nose—Plants are vigorous, fruits large, thick mild flesh of fine quality, bright crimson.

Long Red Cayenne—Hot and pungent, slender twisted pods, medium early bright red when ripe.

Pimento—Very mild with thick flesh of peculiar delicate flavor, prolific, good shipper.

Chinese Giant—Mammoth size, splendid shape, glossy red fruits, bears continuously.

Ruby King—Large, bright red fruits with pleasant and mild flavor, best for slicing.

Parsnip

The best soil for Parsnips is a deep, clean, rich loam, which offers no obstruction to the uniform expansion of the roots. Prepare it the same as for beets or carrots. Sow the seed quite early in the spring one-half to one inch deep, in rows 15 to 20 inches apart, thinning the plants to three inches as soon as large enough, and cultivate frequently until the plants are sufficiently developed so that the foliage shades the soil, and stops weed growth. The roots may remain in the ground until wanted for use during the winter. They are improved by freezing.

Roots not used during the winter should be dug in spring for they will produce seed and become weeds. Parsnips that have run wild are considered poisonous.

Prices All Varieties
Pkt., 10c; Oz., 20c; ¼ lb., 50c; Lb., \$1.50.

Palo Alto—Flesh white, fine texture, tender, free from core and stringiness, and of superior flavor, sweet and rich.

Hollow Crown—Roots long, smooth, white skin, uniform in shape, tender and of good quality.

Long White Dutch—It grows smooth, long roots of excellent quality and is preferred in some sections to other sorts.

Peas

The garden pea is believed to have originated in Western Asia. The Pent-sao, mentioning its introduction into China, calls it the Mohometan pea. The pea seems to have appeared in Europe during the Middle Ages, but it was not cultivated in England even in the time of Queen Elizabeth (1533-1603). Fuller, an English writer, says that peas were brought from Holland and were accounted "Fit dainties for ladies. They came so far and cost so dear."

In certain parts of northern Europe, the pea was dedicated to Thor, the god of Thunder, and was eaten on each Thursday (Thor's Day) in his honor.

Finely ground peas formed the basis of many soup tablets and condensed foods used by armies, explorers, etc.

Green Peas are at their best when perfectly fresh, and should come to the table within five or six hours from the vine. Peas need a rich, friable soil, but an over-supply of nitrogen will result in a rank growth of fruitless vines. Most of the cultivation for Peas should be done before they are planted, and it is most important that the ground be well prepared.

The seed should be sown in drills very early in spring, as soon as the ground is in good condition to work, and covered two or three inches deep. Rows of the extremely dwarf varieties may be as close as 12 to 18 inches apart; the semi-dwarf and tall varieties should be two to four feet apart.

Some sow the seed in double rows six inches apart, placing trellis or brush between the rows, thus making one row of supports do for two rows of peas.

For succession seed should be sown at intervals of about two weeks until the middle of June. They do not do well in hot weather in summer, but good crops may again be produced in the fall.

On the Pacific Coast, where the winters are mild, the seed may be planted in rather light, porous, well-drained soil in November, as instructed elsewhere for

Sweet Peas, and will be ready for use early in June.

One pound of seed is sufficient for 50 to 75 feet of drill, 200 pounds for an acre.

Peas are cold weather vegetables and should be planted either very early or rather late. Seed inoculated with Farmogerm produces heaviest yields. The early dwarf sorts need no support but the tall varieties should be trellised. All varieties are helped if fertilized with Morcrop.

Prices All Varieties, Postage Extra.

Pkt., 15c; ½ lb., 20c; 1 lb., 40c;
10 lbs., \$3.50

Early Varieties

Washington Wonder—16 inches, yields abundantly well filled pods of six to nine wrinkled peas, good size, fine flavor.

Little Gem—18 inches, vines are robust and branching, pods three inches long, peas medium size, wrinkled.

American Wonder—12 inches, very early, dwarf, compact habit, numerous short pods, well filled.

Blue Bantam—15 inches, very early, extra large pods, tightly packed with big peas, has most luscious flavor.

Superb—16 inches, large broad pointed pods with eight or nine peas, very productive and sweet.

Laxtonian—18 inches, has six to eight large peas per pod and bears abundantly, sweet and tender.

Alaska—24 inches, earliest of all, smooth seeded, strong, vigorous grower, its lack of flavor is offset by its earliness.

Gradus or Prosperity—30 inches, has no superior for sweetness and production, pods are numerous and well filled.

World's Record—35 inches, size and quality of the peas is wonderful, earliness considered, pods are large.

Thomas Laxton—36 inches, pods have square ends, are numerous and packed with very sweet peas, a popular variety.

Late or Maincrop Varieties

Lilly's No. 23—24 inches, bears many large pods containing eight or nine peas; its delicious flavor and vigorous characteristics make it the "best of all."

Tall Telephone—60 inches, heavy vines well set with large pods; the market gardeners' favorite, rich sugared flavor.

Dwarf Telephone—30 inches, late heavy vined pea, bearing large, broad well-filled pods freely, best quality.

Lincoln—24 inches, one of the heaviest croppers we know; pods are curved and pointed and especially tightly packed with large peas.

Quite Content—65 inches, both the pods and peas are very large, pods are borne in pairs, quality is exceedingly fine.

Alderman—60 inches, the flavor of the large peas is very fine; this sort is a favorite with canners, yields heavily.

Prizewinner—36 inches, curved pointed, well filled pods, exceptionally fine flavor and very tender.

Sugar or Edible Pod Varieties

Swedish Sugar—70 to 80 inches, pods are large, very sweet and sugary, useful both as pod and shell peas.

Dwarf Gray Sugar—24 inches, pods are very delicious when cooked the same as wax beans.

Potato

The Potato is a native of the elevated valley of Mexico, Peru, and Chili. It is believed to have been introduced into Virginia by the Spanish explorers, and into England from Virginia by Sir John Hawkins about 1565.

In the following century it was cultivated on a small scale in the Netherlands, Burgundy, and Italy. On account of its great yield, the British Royal Society, in 1663, recommended its planting in Ireland as a safeguard against famines which had devastated that country at various times. Nor was the potato very highly regarded in Virginia at this date; and it seems to have been practically unknown in the New England country until the following century when it was brought over from Ireland.

Quoting from an early English writer on the subject we have this meagre description of our present staple vegetable: "The potato is a root found in the New World, consisting of little knobs held together by strings; if you boil it well, it can be eaten; it may become an article of food; it will certainly do for hogs; and though it produces acid and gas in the human stomach, perhaps, if you boil it with dates, it may serve to keep soul and body together, among those who can find nothing better."

A rich, sandy loam is best suited to the production of Irish Potatoes, and the Morcrop Fertilizers employed should contain high percentages of potash. The main crop of Irish Potatoes for family use should be grown elsewhere, but a small area of early ones properly belongs to the garden. The preparation of the soil should be the same as for general garden crops.

Early potatoes should be planted as early in the spring as it is feasible to work the land. Late potatoes should be planted late in May or during June. The rows should be two and one-half to three feet apart, and the hills fourteen to eighteen inches apart in the row.

Lay off the rows with a one-horse plow or lister, and drop the seed, one in a place, in the bottom of the furrow. Cover the seed to a depth of about four inches, using a hoe or one-horse plow for the purpose.

One to three weeks will be required for the potatoes to come up, depending entirely upon the temperature of the soil. The ground may freeze slightly after the

planting has been done, but so long as the frost does not reach the seed potatoes no harm will result, and growth will begin as soon as the soil becomes sufficiently warm.

As soon as the potatoes appear above the ground and the rows can be followed, the surface soil should be well stirred by means of one of the harrow-toothed cultivators. Good cultivation should be maintained throughout the growing season, with occasional hand hoeing, if necessary, to keep the ground free from weeds. Towards the last the soil may be well worked up around the plants to hold them erect and protect the tubers from the sun after the vines begin to die.

After digging the potatoes they should not be allowed to lie exposed to the sun or to any light while in storage, as they will soon become green and unfit for table use. Early potatoes especially should not be stored in a damp place during the heated period of the summer, and will keep best if covered with straw in a cool, shady shed until the autumn weather sets in after which they can be placed in a dry cellar or buried in the open ground. The ideal temperature for keeping Irish Potatoes is between thirty-six and forty degrees F., but they will not withstand any freezing.

Price based on market at planting time. Send for special price list.

Early Rose—Long, with pink skin, deep eyes, meat splashed rose, early and prolific.

Earliest of All—Round, smooth white skin, deep eyes, very early and especially fine flavored.

Beauty of Hebron—Long flattened shape, large, pink skin, medium early.

American Wonder—Long, white skinned, medium size, shallow eyes.

Irish Cobbler—Oblong flattened shape, quite early and very prolific, white.

Gold Coin—Oblong, rather flat, shallow eyes, cream skin, fine baker and late keeper.

Netted Gem—Long, shallow eyes, heavily netted skin, fine flavor, favorite market sort.

Burbank—Large long tubers, heavy yielder, keeps well, has good flavor.

Pride of Multnomah—Large, deep eyed, long tubers, skin white and smooth, prolific.

Other Varieties—We can generally furnish any popular variety on order. It is better, however, to specify second choice when ordering seed potatoes, as the demand is uncertain and your first choice may be sold out.

Pumpkin

Pumpkins are very easy crops to grow provided they are given warm, rich soil. They require quite a long season and should be planted as early as frost danger is past. Sandy loams are preferred. Plant in hills

eight to ten feet apart each way and allow only three or four plants to remain in a hill. Because of their spreading habit Pumpkins are generally planted in patches or fields of corn or potatoes where the vines can grow undisturbed.

Prices All Varieties

Pkt., 10c; Oz., 15c; ¼ lb., 40c; Lb., \$1.25.

Sugar or Sweet Pie—Medium size, very sweet, prolific, meat thick and yellow.

Connecticut Field—Large productive field pumpkin, very good for pies.

Large Cheese—Large, abundant fruiting sort, thick meat, suitable for canners.

Jumbo or King of Mammoths—The largest grown, skin salmon orange, meat very thick.

Pkt., 10c; Oz., 20c; ¼ lb., 60c; Lb., \$1.75.

Radish

The Radish had at one period a gigantic reputation. It is a native of Asia, and according to tradition, among the early Asiatics it was not uncommon to grow them of a hundred pounds in weight.

According to an old legend of Germany, Rubezahl, a coarse and repulsive creature, was the soul of a radish. After wooing a beautiful princess and failing to win her love, he steals her and carries her off to his castle.

When the maiden begs for some agreeable companion, he touches a radish which instantly takes on the human form which can last only so long as a radish can keep its leaves.

When this companion fades the maiden begs for another. Rubezahl changes another radish to a bee. At her first opportunity the Princess whispers a message to the bee and sends it off to find her lover, but the bee does not return. Another radish becomes a cricket. This too, the Princess sends to find her lover, but it never returns.

Watching her chance, the Princess seizes the magician's wand while he is counting his radishes. With it she changes one of the remaining radishes into a horse and dashes away to freedom.

This is a hardy, quick-growing crop, and the seed may be sown as soon as the ground can be worked properly in early spring and for succession at intervals of ten days or two weeks as long as wanted. The soil should be very rich, light and warm. To make them crisp and brittle they must be grown quickly. It is well, therefore, to make a heavy application of Morcrop on the early sorts, a little nitrate of soda will be very beneficial.

The seed may be sown in drills a foot apart and the plants thinned to about two inches, or the seed may be mixed with seeds of slower growing crops such as let-

tuce, carrots, parsnips, etc., and the radishes will be used before the other crops need the space.

Winter radishes are grown the same as turnips, and the seed should be sown in the latter part of July or any time in August.

Prices All Varieties

Pkt., 10c; Oz., 15c; ¼ lb., 40c; Lb., \$1.25.

Lilly's Earliest of All—Superior, extra early, turnip shaped, mild, crisp and tender.

Early Scarlet Turnip White Tip—Small scarlet radishes with white tip, very early.

Early Scarlet Turnip—Red, turnip shaped, very early, medium size, quite pungent.

Crimson Giant—Largest of the round, early sorts, flesh white, solid, crisp, mild and tender.

French Breakfast—Olive shaped, splendid flavor, quick growing, desirable for forcing.

Half Long Deep Scarlet—Flesh crisp, juicy and pungent, forces well, quite early.

Long Bright Scarlet—Roots smooth, uniform and long, fast growing, mild flavor.

White Icicle—Long thick roots, small tops, early, flesh sweet and tender.

Round Black Spanish—Flesh snow white, firm and pungent, roots round but large.

China Rose Winter—Long, tapering, smooth roots, flesh white, mild flavored, keeps well.

Rhubarb

Although the crop is so easily produced and so certain and regular after the roots are established, a large number of home gardens are still without it. Everyone relishes rhubarb pie early in the spring, and this plant gives the first available material for pies.

When started from seed they should be planted like carrots and transplanted the following fall. Generally started by divisions of old roots, thereby, saving one or two years. Thrive best in light soil which should be very rich and full of humus or vegetable matter. Rhubarb can be forced during the winter in the cellar without heat by planting in boxes of rich soil. Earlier and better rhubarb can be grown outdoors if the light is excluded by covering with an inverted barrel or box.

Mammoth Victoria—It is vigorous and very productive of thick, red stalks of fine quality, juicy and rich.

Pkt., 10c; Oz., 25c; ¼ lb., 65c;
1 lb., \$2.00

Salsify

This plant requires a full season to reach maturity. Thin to 3 inches apart in the rows and keep the soil well worked. The roots should reach a foot in length and 1½ to 2 inches in diameter at the top.

A light, mellow, well fertilized soil that has been worked deeply is best. The culture is similar to other root crops and the matured vegetables can be left in the ground and dug as required for winter use. Should be more generally grown as it can be used in many ways. Boiled and diced, rolled in cracker dust and fried in butter gives it a decided flavor of fried oysters.

Mammoth or Sandwich Island—This is the most popular variety, growing twice the size of any other. Mild and delicately flavored.

Spinach

Spinach is easy to grow, thrives in cool weather, and is valuable for greens during the winter and early spring.

Spinach is grown both as a fall and spring crop. Fall crops are sown in August and September and the spring crop either in November or early spring. During growing weather approximately eight weeks are required to grow the crop. Fertilize liberally with Morcrop before planting the seed as much of the satisfaction in growing spinach is derived from crops that grow quickly to a large size.

For spring and summer use, sow in drills one foot apart very early in spring and at intervals of two weeks for succession.

For winter and early spring use, sow in November after other crops have been removed from the ground. Mulch with straw on the approach of very cold weather.

The soil should be light and rich. In gathering spinach the entire plant is removed rather than merely cutting off the leaves. If not sown too thickly, the only thinning necessary will be to use the larger plants first, giving the smaller plants room to develop.

Price All Varieties

Pkt., 10c; Oz., 15c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c

King of Denmark—A desirable new variety, stands two weeks before running to seed, plants vigorous, leaves large, round and quite crumpled.

Mammoth Victoria—Early, long standing, large thick leaves, suitable for fall or spring planting, thrives even in hot weather.

Bloomsdale Savoyed—Very early, hardy, leaves large, round and thick, very much savoyed.

Thick Leaved Improved—Leaves large, crumpled and thick, slow to run to seed, very hardy.

Prickly Winter—Large, smooth, three-cornered leaves, the standard sort for fall planting.

Squash

The early summer varieties of squash do well in all sections of the Northwest, and if given proper care the winter varieties may also be grown in even the most un-

favorable sections. Where the season is short they may be started by the same method as described for musk melons. They require a warm, fertile soil, preferably sand, well-rotted compost or Morcrop fertilizer should be mixed with the soil around the hills as squash are gross feeders. The bush varieties of summer squash are grown almost exclusively now, and these should be planted in hills about four feet apart. Winter varieties, such as the Hubbard, should be planted in hills 12 feet each way, for the Hubbard and other long trailing kinds use the same treatment as described for the pumpkin, and no trouble will be had in getting the squash to mature in any section of the Northwest. Care should be used to see that the squash are all picked and stored before the first fall frost, as they are very easily injured. In gathering the winter varieties care should be exercised that the stem is not broken from the squash, and that the fruit is not bruised. The stem should be left on the squash if they are to be stored.

Price—All Varieties

Pkt., 10c; Oz., 15c; $\frac{1}{4}$ lb., 40c; lb., \$1.25

Bush Varieties

White Bush Scallop—Very early round, flattened, scalloped edge, fruits waxy white.

Early Summer Crookneck—Early, deep yellow in color, true crookneck form, densely warted.

Delicata—An early hybrid, producing fruits varied in form and color, but deliciously flavored.

Vining Varieties

Hubbard—Large, dark green, densely warted, thick yellow meated fruits, vigorous vines.

Mammoth Chili—The largest of the squashes, orange-colored, oblong, smooth, deep meated fruits.

Sibley or Pikes Peak—Smooth-shelled, pale green fruits, meat deep orange colored, fine flavored.

Marrow Squashes

English Vegetable Marrow—Oblong, creamy white fruits, used when young either boiled or fried like egg plant.

Boston Marrow—Large oval fruits, flesh salmon yellow, fine texture and flavor.

Swiss Chard

Swiss Chard is a better grown for its leaves, which are large, tender succulent, and highly esteemed as "Greens" on account of their agreeable flavor. The leaves are boiled like spinach, the stem or midrib can be removed before cooking and only the best leaves should be used as new leaves

appear after picking. Culture is the same as for table beets.

Price—All Varieties

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ lb., 45c; lb., \$1.25

Giant Lucullus—Large savoyed leaves, thick fleshy stalks.

Large Ribbed White—Tender succulent leaves, extra broad white ribs.

Tomato

The tomato or Love Apple is one of the few garden vegetables of American origin and it is only within the last century that it has come into general cultivation. Because of its relation to the nightshade family, the tomato was for a long time held in disrepute by gardeners and people generally.

The first decided improvement on the tomato in this country was the Tilden, introduced by Mr. Tilden of Iowa, about 1865. This was followed by a still finer variety in 1870, when the Trophy was brought out by Col. Waring of Rhode Island.

The canning industry was becoming prominent at this time and a larger and earlier tomato was in demand. The Trophy was found to possess these qualities and it may be said to mark an epoch in tomato culture, as well as in American vegetable growing.

Since its exceptional food values have been established, there has been an ever-increasing demand for the tomato. It is a universal favorite, either as a canned or fresh vegetable. The old traditions of its unwholesomeness have been swept aside completely and it is recognized as one of our richest vitamine foods, adapted not only to adults, but to youngsters and even infants.

The plants should be started in a greenhouse, hotbed, or in a warm, light room in February or early in March, and transplanted once or twice before being set outdoors. The best plants are produced by transplanting single plants to pots or berry boxes.

They cannot stand any cold, and should not be set outdoors until the weather is thoughtly warm. The soil should be rich, mellow, and in fine condition. If the plants are not to be pruned they should be set four feet apart each way. They may be set in rows with early maturing crops that will be out of the way before the tomatoes need the room.

West of the Cascade Mountains, where the climate is cool, they must be favored in every way possible. Set the plants two feet apart in rows four feet apart. Prune the plant to a single stem and keep all side shoots and other superfluous growth off, and train the plant to a stake set at each

plant. Or set the plants four feet apart, set a stake at each plant and stretch wires along the row of stakes, one twelve inches from the ground and the other thirty inches from the ground. This will form a trellis for the plants which should be pruned to four stems, which should be trained on the wires.

Pruning increases the size of the fruits, and also permits the sunlight to reach the blossom and fruits, thus promoting a much earlier crop.

There are three varieties that are well adapted to west of the Cascade Mountains—they are "Lilly's Puget Sound Special," "Sparks Earliana," and "Lilly's Puget Sound Forcing."

Price, all varieties,

Pkt., 10c; Oz., 50c; $\frac{1}{4}$ lb., \$1.50;

Lb., \$5.00.

Large Fruited Varieties

Lilly's Puget Sound Special—Most dependable west of the Cascades, smooth, medium sized fruits, flesh solid, meaty, coreless and rich red colored.

Lilly's Earliana—One of the earliest, fruit borne in clusters, smooth, uniform size and solid.

Lilly's Puget Sound Forcing—The fruits are close, stem smooth, early, firm and meaty, very prolific.

Livingston's Coreless—Medium late, large, globe shaped, coreless, flesh heavy and bright red.

Ponderosa—Massive size, good form, smooth, solid, almost seedless, a delicious flavor.

Dwarf Champion—Dwarf, compact habit, early, vigorous and productive, medium size.

Bonny Best—Fruits in clusters, ripens uniformly, solid and smooth, early, productive.

New Stone—Late, very large, solid, smooth oval shaped fruits, excellent for shipping.

John Baer—Early, very productive, bright red fruits that are round, smooth and solid.

Chalk's Early Jewel—Exceptionally fine, early, uniform, round, smooth, scarlet fruits.

Small Fruited Varieties

Golden Husk or Ground Cherry—The numerous small fruits are enclosed in husks, sweet flavored, fine for preserves.

Red Cherry—Small, perfectly round, bright red fruits, used for pickles, etc.

Red Pear—The small pear shaped bright red fruits are used for preserves and "tomato figs."

Yellow Pear—Similar to red pear in shape and size but of clear yellow color.

Yellow Plum—Large clusters of small plum shaped fruits; very fine flavors.

Tobacco

Tobacco can be grown in the warmer sections of the Northwest. The plants should be started early in spring in hotbed or cold frame and transplanted to the open ground when the weather has become thoroughly settled and warm. Wood ashes should be mixed with the soil, and the plants set four feet apart each way. Cultivation is the same as for corn. Fertilize liberally.

It requires 60 days or longer to produce plants, the seed germinates very slowly. In Tobacco sections, seeds are planted in the ashes where brush has been burned, as weeds do not start readily in such places.

Price, all varieties

Pkt., 10c; Oz., 75c; ¼ lb., \$2.50.

Connecticut Seed Leaf—Hardy, vigorous, large leaved, suitable for the Northwest.

Havana—Medium sized leaves, very thin and of fine texture.

Turnip

Turnips may be grown in any good garden soil, but do best in rich, light, sandy soil. For table use, the early varieties should be sown as soon as the ground is in good condition to work in spring in drills twelve to fifteen inches apart; the plants should be thinned to three inches apart in the rows. For succession, sow at intervals of about three weeks. Turnips should be used for table while young, before they are full grown. They may be grown during the summer but do best in cool weather in spring and fall.

For fall and winter use, the seed should be sown in August or September. For stock food, the seed is sometimes sown broadcast in the field after last cultivation of corn or other cultivated crops.

Turnips are quite hardy and need not be harvested until after several frosts. West of the Cascade Mountains they are sometimes left in the ground until wanted for use

during the winter. They may be stored in a cellar or buried in a pit.

Price, all varieties, except as noted
Pkt., 10c; Oz., 20c; ¼ lb., 60c; Lb., \$1.75.

Snowball—Very early, small globe-shaped, smooth, thin skinned, flesh white, crisp and sweet.

Early White Milan—Very early, medium size, fine grained, tender, mild, sweet flavored.

Petrowski—Medium size, smooth skin, and flesh yellow, top short and spreading, flesh crisp, tender and very pleasant; keeps well.

Price, following varieties

Pkt., 10c; Oz., 15c; ¼ lb., 35c; Lb., \$1.00.

Purple Top White Globe—Early, globe-shaped, medium sized, yields heavy and keeps good.

Purple Top Strap Leaved—Roots flat, medium size, flesh white, fine grained and tender.

Golden Ball or Orange Jelly—Delicious flavored, smooth, round, yellow flesh and skin.

Yellow Aberdeen—Large, late, sweet, yellow fleshed, long keeper and very productive.

Cowhorn—Long, crooked shaped, white, fine grained, quick growing stock turnip.

Rutabaga

The culture of the rutabaga is the same as for the turnip, except that it requires more room and a longer period for growth. The roots are quite hardy and will withstand considerable frost. They are used for the table like turnips, and are valuable for stock food.

Price, all varieties

Pkt., 10c; Oz., 15c; ¼ lb., 40c; Lb., \$1.25.

Lilly's King of Swedes—Large, productive, oval shaped, flesh rich yellow, splendid keeper.

American Purple Top—Popular for table use and stock, flesh yellow, solid and sweet.

Bangholm—Very large, flesh mild, firm and sweet, color yellow, texture fine.

Grow a Garden

1. Do You Know—That a half-acre garden can be made to produce as much money value as 3 acres in farm crops?

2. Do You Know—That a good garden will reduce your grocery bill one-third, and that the county agents will help you?

3. Do You Know—That vegetables are necessary in the human food supply?

4. Do You Know—That gardening is a man's job and will pay you \$1.63 for each hour of honest work, or \$16.30 for each day?

5. Do You Know—That the Extension

horticulturists have data showing that a backyard garden of 1-20 of an acre has been operated at a cost of \$18.64 a year with the net return of \$47.28?

6. Do You Know—That the "Garden Bank" is the only bank that will pay 300 per cent?

7. Do You Know—That our best gardeners are our business men of most responsible positions?

8. Do You Know—That you can grow a garden and that there is no excuse for your not having a garden?

Flower Gardening

Among the choicest flowers scattered over the earth are some whose lives are short. They sprout from seed, grow, flower and produce seed in their turn—and then die, all within the limits of a single season of our gardening year. These are annuals. The very aim of their existence is seed production, and if it were not for our watchful care, many of the sorts would exhaust themselves early in the season. The more flowers we pluck the more they bloom. This is the great charm of annuals. They may always be depended upon to give a splendid showing the year they are sown.

Plants which live year after year in the garden are known as perennials. The progressive garden lover should, each year, add some of the best kinds to his garden. Someone has truly written that the most beautiful gardens are in the mind, not in the soil. The flowers in your own garden are always more interesting than those in the gardens of another. They are the results of your labor; there is the enjoyment of ownership; they are your flowers.

"Nothing without labor" is the motto of the garden, although it is true that some perennials require but little care. He who loves the garden enough does not think of the labor but of the pleasure, he remembers only the triumph of having lusty, flowering plants. He prepares his soil properly, realizing that the camouflage of having a good surface soil, but a poor soil beneath, fools persons but not plants. He talks little about the bugs; he sprays them.

Flowers often make the difference between a habitation and a home, and it is surprising that there are so many unattractive habitations when so little expense and labor would transform them into real homes. It is so much easier to be cheerful among pleasing surroundings. Many of the prettiest and most satisfactory flowering plants are easily grown from seed, and are especially pleasing when tastefully arranged with regard to color, height, season of blooming, and to harmonize with surroundings.

There are no more satisfactory flowers than those grown from seed, especially the easily grown and brilliant flowered annuals. The beautiful shrubs and lilies, of course, have their place, but are far more expensive than a paper of seed which will furnish a large number of plants with usually enough for one's garden and some to spare.

The seed bed for flowers should be carefully prepared. The soil should be rich, consisting of a good proportion of sand and leaf mold, and should be very finely pulverized. The smaller seeds should be cov-

ered very lightly by sifting fine dirt over them, just enough to hide them. Water should be applied in a fine spray, and not too much of it. Most plants are best started under glass or in the house and transplanted when large enough.

Some of the most satisfactory flowering annuals may be grown practically the same as garden vegetables, but others, although not difficult to grow require different treatment. Most of the failures in growing flowering plants from seeds are on account of a lack of knowledge of the habits of the different plants. If the following directions are followed closely success will be the rule.

For starting plants indoors a greenhouse or hotbed is best, but they may be started very satisfactorily in shallow boxes or earthenware seed pans in a window in a reasonably warm room in the house.

In the bottom of the box, or flat, which should be only two or three inches deep, should be placed an inch of broken pots or other coarse material to insure perfect drainage. The box should then be filled to within about a half-inch of the top with finely sifted soil consisting preferably of equal parts of sand, leaf mold and light garden loam. Fertilizer should not be used until the plants are transplanted.

The soil should be pressed down firmly and evenly and watered thoroughly the day before the seed is to be sown. Sow the seed thinly on the surface, and cover with finely sifted soil pressed down firmly. Very small seeds should be barely covered; larger seeds may be covered to a depth of about one-eighth of an inch. Many failures are on account of covering seeds too deeply.

Cover with a pane of glass or sheet of paper, to prevent too rapid evaporation of moisture, and keep in a temperature of as nearly sixty to seventy degrees as possible.

Watering is of the utmost importance. The soil must not become dry, and it is fully as important that it should not be too wet. It is best done with a fine spray.

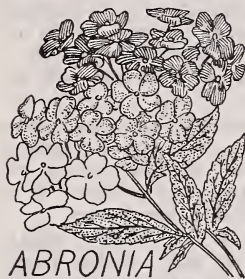
Remove the covering after the seeds have germinated. When the plants are large enough to handle they should be transplanted into similarly prepared boxes, an inch or more apart each way, or into small pots, to be kept until time to plant outdoors. The soil should be rich, and may be fertilized with well-rotted manure or commercial fertilizer.

The plants should have an abundance of air, and should be gradually hardened off before they are set outdoors.

When setting the plants outdoors they should be allowed plenty of room, and the soil and location should be suitable for that particular species. To get pleasing and artistic results they should be placed with regard to height, color and time of blooming to harmonize with other plants, shrubs and surroundings. There is unlimited opportunity for display of taste, and in this lies one of the greatest pleasures of gardening.

Abronia

(Sand Verbena)



ABRONIA

A rapid growing, trailing annual which is excellent for growing in baskets, the rocky, or the open border. The trailing stems often reach a length of 3 to 5 feet. They throw up numerous flower-spikes throughout the summer and fall. The blooms are borne in clusters not unlike Verbenas. They are of an attractive, bright rosy lilac color with white centers, quite fragrant and the seed is best sown in the open after all danger from frost is passed. It delights in a dry, poor soil and sunny situations.

No. 1170. Abronia—Mixed colors:
Pkt., 10c; 1/4-Oz., 50c.

Adonis

(Pheasant's Eye)



ADONIS

It would be difficult to find a bright flowered annual that blooms earlier than does Adonis. Flowers are bright colored, resembling large Buttercups with finely cut ornamental foliage. Grow about a foot high and is especially suitable for rock gardens and borders. Any good light soil will do and they grow either in shade or sun, partial shade being preferred. Develops rather slowly from seed and does not like to be moved.

Culture—Sow seed outdoors where the plants are to remain in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Thin to stand 10 to 12 inches apart.

No. 1171. Adonis—Mixed colors:
Pkt., 10c; 1/4-Oz., 50c.

In transplanting the seedlings grown from a packet of mixed annuals do not make the mistake of selecting only the largest plants lest you, in that manner, select only one color from the mixture. Some varieties in the mixture are bound to be hardier and thrifter than others. Often the sorts slow to start are later productive of the choicest blooms. Also many times the rank growing seedlings do not flower freely.

Full instructions for culture are to be found on each packet of flower seed.

Ageratum

(Floss Flower)



AGERATUM

Hardy annual growing from 6 to 10 inches high. Sow seed in hot-bed during February or March and transplant for borders when all danger from frost is past, setting plants four to six inches apart.

Keep the faded flowers picked, otherwise the plants will stop flowering and the clear blue effect will be marred. When sown in open ground wait until the soil is good and warm, in this case the plants do not reach their full splendor until towards fall.

Ageratum prefers rich, light soil and not much shade, and when conditions are right will continue to bloom from 10 to 15 weeks.

No. 101. Ageratum, Mexicanum—Mixed. About eight inches high, of free branching habit.

Pkt., 10c; 1/4 Oz., 30c.

No. 439. Ageratum, Little Dorrit—The plant is six inches tall and a foot wide and is a perfect mass of blue flowers all summer.

Pkt., 10c; 1/4 Oz., 25c.

Alyssum

(Sweet Alyssum)



SWEET ALYSSUM

Hardy annual growing 8 to 12 inches high. Sow seed in February under cover and transplant in April or the seed may be sown, where plants are to remain, during April and May. A light brown soil is best and by trimming back the plants a little when first blooms begin to wither, they will continue to bloom until killed by frost.

Unexcelled for borders, beds, baskets, pots, rockeries, and for cutting. It is a

hardy annual, grows about nine inches high and is covered with spikes of small white flowers during the summer and fall. It may also be grown in pots in the house during winter, where the exquisite fragrance is very pleasing.

No. 2. *Alyssum (Benthami)*—White.
Pkt., 10c; 1/2 Oz., 25c.

Amaranthus

(Love-Lies-Bleeding)



This (annual) variety of *Amaranthus* has long, drooping spikes of blood red flowers resembling heavy chenille. The plant reaches the height of 5 to 6 feet. They will grow best in the hottest locations. The soil should not be very

rich as the colors are more brilliant when grown on poor soil and the foliage does not out-do the flowers. Sow seed outdoors as soon as the ground gets warm in the spring or start the plants indoors in February and transplant, setting the plants 4 to 5 feet apart as they require much space.

(Please note that seed saved from the finer sorts frequently produces inferior plants.)

No. 1173. *Amaranthus (Love Lies Bleeding)*—Red. Pkt., 10c; 1/4 Oz., 30c.

Anemone

(Wind Flower)



ANEMONE

white, red, pink, etc., with bright colored centers.

Hardy perennial, grows from 6 to 10 inches in height. The blooms come in a great variety of colors and resemble, somewhat, the single poppy in shape. Blooms measure about 2 to 3 inches across.

They make a beautiful display when planted in beds or borders and are excellent for bouquets and table decorations. Seed should be sown in a light shady loam any time from April to August for next Spring's bloom.

No. 1174. *Anemone*—Mixed colors.
Pkt., 10c; 1/4 Oz., 50c.

Amaranthus

(Joseph's Coat, Tricolor)

Hardy annual, grown especially for its brilliant, ornamental foliage. Produces a striking effect as a back-ground or centerpiece for beds and is also used for borders. The foliage is beautifully marked with rich scarlet, yellow, green and white. *Amaranthus* is the most stunning of all variegated leaved plants. They grow to a height of 2 to 3 feet. Plants should stand about 2 feet apart.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established, thin out or transplant to prevent crowding. If started indoors, young plants should be transplanted to the open ground after it has become warm and the weather thoroughly settled.

No. 1172. *Amaranthus (Tricolor)* variegated foliage—Pkt., 10c; 1/4 Oz., 30c.

Antirrhinum

(Snapdragon)

This is a valuable border plant, and although it is a perennial, it may be treated as an annual in the northwest, blooming the first season from seed. The bright colors and peculiar form of the flowers are attractive and the spikes are useful for cutting, as they keep fresh a long time.



ANTIRRHINUM

Seed may be sown in the open ground in May, and the plants will bloom in August, but for early bloom, the seed should be sown in the hot-bed in February or March, and the plants transplanted into beds of warm, dry rich soil early in April or May. Whole masses of Snapdragons are appealing, but individual plants have a charm which we cannot resist. As cut flowers they are very adaptable. During winter they should be protected with a light mulch, and will bloom early the next spring. Grow from 1 to 3 feet high. They succeed best in a rather light soil in a sunny location.

No. 921. *Antirrhinum, Black Prince*—Dark crimson flowers and very dark foliage. Grows about eighteen inches high. Pkt., 10c; 1/4 Oz., 50c.

No. 1073. *Antirrhinum, Golden King*—A splendid yellow Snapdragon; three feet high.

Pkt., 10c; 1/4 Oz., 50c.

No. 1074. *Antirrhinum, Delicata*.—A beautiful pink; three feet high.

Pkt., 10c; 1/4 Oz., 50c.

No. 1075. **Antirrhinum, Apple Blossom**
—A charming pink shade on a white
ground, with a white throat. Three feet.
Pkt., 10c; ¼ Oz., 50c.

No. 1076. **Antirrhinum, Brilliant Scar-**
let—A very effective red. Three feet high.
Pkt., 10c; ¼ Oz., 50c.

No. 104. **Antirrhinum, Dwarf, Mixed**—
Best of the dwarf varieties, all colors mixed.
Grows about eight inches high.
Pkt., 10c; ¼ Oz., 50c.

No. 4. **Antirrhinum, Tall, Mixed**—A
mixture of good tall varieties, growing
three feet high. All colors.
Pkt., 10c; ½ Oz., 75c.

Arabis

(Rock Cross)

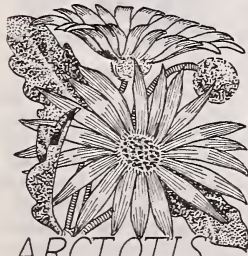
A hardy perennial and one of the earliest
and prettiest spring flowers. The spreading
tufts are covered with a sheet of pure white
flowers very early in spring. It withstands
drought, and is unequalled for rockeries
and edging. Grows six inches high and a
foot or more in diameter. Sow the seed in
fall or spring, preferably in seed bed, to be
transplanted when wanted. May be propa-
gated by division of plants or by cuttings.

No. 1035. **Arabis Alpha**—White.

Pkt., 10c; ¼ Oz., 25c.

Arctotis Grandis

(African Daisy)



ARCTOTIS

This annual is
easily grown from
seed, each plant
quickly forms a
bush two feet
across, with silvery
white, deeply cut
foliage. The daisy-
like flowers measure
2½ inches across.
They are silvery
white with a sky-
blue eye surrounded
by a narrow yellow
zone. The under part
of the petal is lilac-blue. Borne on long
stems above the foliage. The flowers are
excellent for cutting as the stems are 10
to 12 inches long. Cut blooms last a week,
closing each night and even some unde-
veloped buds will open in water. Plants
grow to a height of two feet. Sow the
seeds either in the open ground as soon as
the ground is warm or start the plants in-
doors in February. The seed germinates
rapidly and the bloom period lasts from
July until frost. Plants should stand 12 to
18 inches apart.

No. 1136. **Arctotis Grandis**—White, shaded
blue. Pkt., 10c; ¼ Oz., 35c.

Argemone (Prickly Poppy)

These prickly-
leaved, white and
yellow Poppies are
very interesting to
grow. They are
perennials in the
south, but are best
treated as annuals
in the northwest.
They attain a height
of three feet and
flowers appear early
in July and con-
tinue to come until
frost. Some of the
plants have beauti-
fully variegated
foliage. The seed
should be sown
where the plants
are to remain as
the plants are hard
to move success-
fully. Thin the
plants to one foot
apart. Plants thrive
best in light, rich
soil and sunny
location. They self
sow.



ARGEMONE

No. 1175. **Argemone**—Mixed colors.

Pkt., 10c; ¼ Oz., 50c.

Aster

The aster is cer-
tainly one of the
most satisfactory
annual flowering
plants. The great
variety in its size,
color, form and
season of bloom-
ing makes it a most
satisfactory plant
for supplying cut
flowers. In fact,
many of the im-
proved sorts produce
flowers equal in form
and size to some of
the better sorts of
chrysanthemums.
The habit of growth
adapts the aster
not only to close
planting for cut
bloom, but some
forms are robust,
tall-growing plants,
well adapted for
use in an herbaceous
border where late
bloom and care-
less effects are
desired. The more
compact-growing,
large flowered
forms are most
desirable for cut
blooms, while the
tall-growing, open
types are most
useful in wild
gardens or for
screens. The vigor
and ease of culture
of the aster are
factors which
contribute to its
popularity. Plants
from seed sown in
the open ground
in May bloom in
September and
October, when the
flowers are seen
at their best. For
July and August
blooms, the seed
should be sown
in March in cold
frame or in pots
or boxes in the
house. Cover the
seeds lightly with
deep, rich, light
soil and when the
plants have three
or four leaves,
transplant to
other boxes or
pots, setting the
plants about two
inches apart. After
all danger of frost
is past transplant
to the permanent
bed, setting them
twelve to eighteen
inches



ASTER

apart, according to variety. Morcrop fertilizers are best. They require rich, well prepared soil and plenty of water.

Points to remember:

Do not keep the seed bed too damp.

Checking the growth causes poor blooms and rust.

Shading plants when young prevents injury from bugs.

If plants become badly diseased, burn them.

Lilly's Crego Giant are the finest and largest of all Comet Asters. The flowers are immense, often five inches in diameter, and are composed of long, wavy, twisted petals gracefully formed into loose, yet densely double, half globes, equaling some of the finer Chrysanthemums.

The plants are of luxuriant, branching growth, two feet tall, and bearing twenty to thirty of these magnificent flowers on very long stems, which gives them added value for cutting. They keep in good condition longer than other varieties.

Price, any variety: Pkt., 10c; 1/4 Oz., 50c.

No. 1012. Crego Giant Aster—White.

No. 1013. Crego Giant Aster—Pink.

No. 1036. Crego Giant Aster—Crimson.

No. 1037. Crego Giant Aster—Lavender.

No. 1077. Crego Giant Aster—Azure Blue.

No. 1078. Crego Giant Aster—Purple.

No. 939. Giant Branching Aster—Mixed.

Colors.

Lilly's Giant Branching, a beautiful, late flowering variety. The flowers are large, very double, and are borne on long stems. This variety is especially valuable for bedding.

No. 940. Giant Branching Aster—White.

No. 941. Giant Branching Aster—Pink.

No. 942. Giant Branching Aster—Lavender.

No. 1080. Giant Branching Aster—Crimson.

No. 939. Giant Branching Aster—Mixed

Lilly's Mixed Asters—A fine mixture of many of the best varieties of annual Asters, producing a great variety of splendid forms and colors. No. 900. Asters—Mixed colors.

Balsam

(Lady Slipper)



BALSAM

A native of India, the garden balsam loves a hot sun, rich soil and plenty of water. The young plants are quick, sure growers and from seed sown in the open ground in May soon form handsome bushes thickly massed with large, rose-like

flowers. Transplanting two or three times has a tendency to dwarf the plants into

better shape and make the flowers more double. They should be given plenty of space to develop, and should not be planted closer than twelve to eighteen inches each way. The flowers are produced on the under side of the leaves or inside the plants and show to the best advantage when planted in the margin of groups or to crown a terrace. For early bloom the seed should be sown in March in a gentle hot-bed or in the house, and when large enough transplanted to other boxes or pots, and to the permanent bed when danger of frost is past. An abundance of sunlight and water is required.

No. 141. Double Balsam—Mixed colors.
Pkt., 10c; 1/4 Oz., 25c.

Bellis

(English Daisy)

A favorite half-hardy perennial border plant much used for edgings, borders, and rock works. Pretty double flowers in white, pink and red are produced lavishly from early spring until well into the summer. They bloom the first year from seed and best results are obtained by growing new plants each year. Plants may be started indoors in February or March, or the seed may be sown in seed bed or permanent bed early in spring, but it is best to sow the seed in September and seed should be lightly covered with fine soil, well pressed down. Plants should be given some protection in the way of a light covering of straw during winter. They thrive best in a moist soil and cool atmosphere. The plants should be set about six inches apart.

No. 13. Bellis Perennis—Mixed colors.
Pkt., 10c; 1/4 Oz., 45c.

Blue Lace Flower

(Didiscus)

This flower is better for cutting than for garden decoration as the plants are not particularly showy. Arranged indoors with small foliage the blooms display their charms to advantage. The flower heads are made up of small, azure blue flowers produced in umbels like those of the Wild Carrot. The stems are hairy and about 2 feet in length. July and August is the time of bloom. Sow the seed indoors early in March and give each plant at least a foot of space when transplanting to the garden.



BLUE LACE FLOWER

No. 1184. Blue Lace Flower—Azure Blue.
Pkt., 10c; 1/4 Oz., 50c.

Cacalia (Tassel Flower)



CACALIA
This brilliant orange-scarlet flowered annual is worthy of a place in any garden. It is not large, but the dash of color it provides is noticeable. It is much admired in mixed bouquets. The flowers are actually like tassels borne on long stems. Culture is simple. Sow the seeds outdoors early in the spring and thin the plants to stand four to six inches apart. Sometimes catalogued and known as Emilia or Flora's Paint Brush. Plants remain in bloom from early summer until autumn. Fine for cutting. Height 1½ feet.

No. 1176. *Cacalia*—Orange Scarlet.
Pkt., 10c; ¼ Oz., 50c.

Calliopsis



CALLIOPSIS
One of the showiest and most easily grown of garden annuals, with graceful long stemmed flowers well suited for bouquets. The plants form perfect little bushes about two feet high and are a perfect mass of yellow, maroon and brown flowers from early summer until killed by frost. Prefer sunny spot and sometimes self sow. Clip off seed heads to induce continued bloom. The best flower grown of brownish coloring.

No. 116. *Calliopsis*—Mixed colors.
Pkt., 10c; ¼ Oz., 25c.

Calendula (Pot Marigold)

A hardy annual, about a foot high, blooming freely and earlier than the marigold. The coloring of the large showy flowers ranges through all the shades of yellow from ivory to deep orange. Should be planted eight to ten inches apart in masses or borders. A moderately rich, light soil is most congenial to these plants, but they will thrive in poorer soil than almost any other plant. The seed may be sown in the open ground early in spring and will bloom continuously from early summer to late in the fall. Keep the faded

flowers picked off if continued bloom is wanted. They self-sow. Height of plant, 1 to 2 feet.

No. 117. *Calendula*—Mixed colors.
Pkt., 10c; ½ Oz., 25c.

Campanula (Canterbury Bells)



CAMPANULA
These fine old plants are rich in color, profuse in bloom, and of easy culture. For outdoor effects, when planted in quantity, they are glorious, and the finest full-blown specimens can be transplanted to pots for house decoration by soaking the soil about them with water and lifting them with a ball of earth. They are biennials, and bloom the second year from seed, growing about three feet high and bearing a profusion of double and single varieties of bell-shape blue, white, purple and red flowers. The seed should be sown outdoors early in July, and the plants transplanted to cold-frame in October setting them six inches apart. In May they should be transplanted to the permanent bed eighteen inches apart. They like rich soil and good drainage.

No. 15. *Single Campanula*—Mixed Colors.
Pkt. 10c; ½ Oz., 45c.

No. 157. *Double Campanula*—Mixed Colors.

Pkt., 10c; ¼ Oz., 30c.

No. 1082. *Single Campanula*—White.
Pkt., 10c; ¼ Oz., 25c.

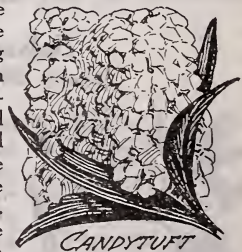
No. 1083. *Single Campanula*—Blue.
Pkt., 10c; ¼ Oz., 25c.

No. 1084. *Single Campanula*—Pink.
Pkt., 10c; ¼ Oz., 25c.

Candytuft (Iberis)

The candytufts are among the best white flowers for edging beds, for planting in belts, beds, or massing for rockeries and for cutting. Several of the varieties are fragrant, and all are profuse bloomers.

The seed should be sown outdoors in April where the plants are to bloom, and well thinned when they have grown about an inch high. Make a second planting a month later, and a third late in July for fall flowers. September sowing will give winter-blooming plants. The soil for best



results should be rich, and the plants given an abundance of water. They branch freely, and if some are removed the flowers will be larger. They self sow. Fall sown seed blooms early in June, spring sown in mid-summer.

No. 922. Candytuft, Empress.—A grand variety, producing large spikes of bloom resembling a white Hyacinth. The plant is about twelve inches high.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

No. 39. Candytuft, White Rocket.—Good spikes of pure white flowers, six inches tall.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

No. 1144. Candytuft, Umbellata.—Mixed colors. All the shades of pinks, reds, purples and white. Very effective. 12 to 20 inches high; good for cutting.

Pkt., 10c; $\frac{1}{2}$ Oz., 35c.

Carnation (Dianthus)



These splendid half-hardy perennials are very satisfactory garden plants west of the Cascade Mountains.

The seed may be sown in hotbed or in boxes in the house early in spring. The plants should be trans-

planted in small pots when they are large enough to handle, and shifted to larger pots as they grow. They should not be set outdoors until all danger of frost is past. If left outdoors during the winter they must be well protected. The Marguerite Carnations are probably the most satisfactory for out-door culture, and may be treated as annuals. They require a rich soil and plenty of moisture.

No. 402. Marguerite, Carnation.—White. Strong growers; free flowering; especially desirable for garden culture.

Pkt., 10c; $\frac{1}{4}$ Oz., 50c.

No. 161. Double Carnation, Grenada.—A beautiful, early, dwarf variety. Sweet scented, double scarlet flowers.

Pkt., 10c; $\frac{1}{4}$ Oz., 80c.

No. 284. Marguerite, Carnation.—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 16. Double Carnations.—Mixed Colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 50c.

Celosia (Cockscomb)

An odd and picturesque decorative feature of the garden. The dwarf varieties make novel and attractive borders; the tall ones form striking groups. For winter

bouquets they are cut before fully ripe, and dried in the house. They are hardy annuals. The seed may be planted in hotbed or in boxes or pots in the house in March or April, and the young plants transplanted to the garden in May, or the seed may be planted in the open ground in May. Transplanting into rich soil about the time the combs begin to form will make the flower heads much larger. The dwarf varieties grow about eight inches high, the tall varieties two feet. They are bright from mid-summer until frost. Colors range from crimson to golden yellow. The heads may be kept in water for weeks when cut. They are often used as everlastings. Give the plants plenty of room; 2 feet is not too much.

No. 17. Celosia Cristata.—Mixed colors. About one foot high, bearing large, highly colored combs.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 119. Celosia Pyramidalis Plumosa.—Mixed colors. Large flowered, feathered.

Pkt., 10c; $\frac{1}{4}$ Oz., 50c.

Centaurea

(Corn Flower, Bachelor Button,
Sweet Sultan)

In this are embraced several quite distinct hardy annuals. They are of the easiest culture, grow about eighteen inches high, and are excellent for beds, borders, and cut flowers. The seed may be sown in seed bed or perma-



nent bed either in fall or early spring. The plants should be set about four inches apart. If cut in bud they last 10 days. They prefer cool location and moist soil.

No. 923. Centaurea, Dwarf Victoria.—A dwarf, double Bachelor's Button. The plants are only about nine inches high, bear a profusion of large, blue, double flowers, and are excellent for pots and edgings.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 1085. Centaurea, Blue Emperor.—Tall, single Cornflower, growing two feet high.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 225. Centaurea, Cornflower.—The old-fashioned Bachelor's Button, Ragged Sailor, or Bluebottle.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 1016. Centaurea, Giant Sweet Sultan.—(Imperialis). The finest of all Sweet Sultans for cutting, lasting a long time in water. Beautiful, artistic, sweet scented flowers borne on long, strong stems.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Cineraria



CINERARIA

Tender perennial greenhouse and pot plants bearing profusely daisy-like flowers in white, blue, violet, and crimson shades. The seed should be sown in flats in a greenhouse in January, merely pressing the seed into the soil and covering very lightly with finely sifted soil. Water with a fine spray. Transplant to small pots when large enough to handle, and shift to larger pots as the plants grow. They may be set outdoors in a shaded position when the weather is thoroughly warm. Water freely. Height, 1 to 2 feet.

No. 19. Cineraria Hybrida—Mixed Colors. Pkt., 10c; 1/8 Oz., \$1.25.

Clarkia



CLARKIA

A pretty, hardy annual, native of the Pacific Coast and consequently blooming in its greatest perfection here. They are useful for bedding, borders, edgings and for hanging baskets. They grow about eighteen inches high, and bear bright rose, purple and white flowers from mid-summer until late fall, in profusion on long, graceful sprays. Seed should be sown outdoors in the fall or early spring. They thrive best on the sandier soils in either full sun or partial shade. Allow 7 to 9 inches between the plants. Splendid for cut flowers as all the buds open in water. Height, 2 to 2 1/2 feet.

No. 1128. Clarkia—Single and Double, mixed colors. Pkt., 10c; 1/4 Oz., 25c.

Columbine (Aquilegia)



COLUMBINE

Hardy perennial, very desirable and easily grown, forming large, permanent clumps. Blooms profusely early in the season and remains in bloom until very late. The flowers are exquisitely formed in various colors. Very desirable for borders or for groups among shrubbery. Height, 2 to 3 feet.

Columbines are excellent for rock gardens as well as for the herbaceous border where they make clumps sometimes two feet in diameter. They are somewhat difficult to arrange as cut flowers, but a truly exquisite effect is obtained by placing a single truss of bloom in a vase by itself. Plants can be started by sowing the seed in the open any time between April 1st and the middle of July, and they will bloom profusely the following season. Warm, sandy soil is preferred.

No. 1177. Columbine—Mixed colors. Pkt., 10c; 1/4 Oz., 50c.

Chrysanthemum (Annual)

The large-flowered types of chrysanthemums, which produce such gorgeous shows in the florists' stores, are not hardy, and must be grown in the greenhouse. The annual chrysanthemums bloom most satisfactorily if the seeds are sown early in a hotbed or cold frame and the young plants transferred to the open as soon as the soil has become sufficiently warm to keep them growing without check. They should be set ten inches apart in their permanent location. Somewhat less satisfactory results can be secured by sowing the seed in the permanent bed early in May, and thinning the young plants to eight inches apart. If the same care in regard to disbudding and pinching back is taken with the annuals as with the large flowered perennials the work will be rewarded by the greatly increased size of the flowers. Bloom profusely throughout the summer months and into the late fall. They like rich soil, plenty of room and pruning.

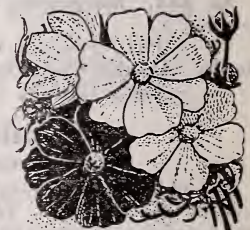


CHRYSANTHEMUM

No. 1058. Chrysanthemum Coronarium—Double Mixed Colors. Pkt., 10c; 1/4 Oz., 25c.

Cosmos

A favorite, late-flowering annual, especially adapted to the Pacific Coast, growing three to four feet high and bearing bright, bold flowers four inches in diameter. Most effective when planted in masses or background borders. Seed may be started in the house



COSMOS

in March, or may be sown in the open ground in May, and the plants thinned to eighteen inches apart. When the plants are about a foot high the tops should be pinched out to induce a bushy growth. They prefer a rather light, not too rich soil, but do well almost anywhere. Keep well when cut.

No. 282. *Cosmos*—Mixed colors.

Pkt., 10c; 1/4 Oz., 75c.

No. 1032. *Cosmos*—White.

Pkt., 10c; 1/4 Oz., 75c.

No. 1033. *Cosmos*—Pink.

Pkt., 10c; 1/4 Oz., 75c.

No. 1034. *Cosmos*—Red.

Pkt., 10c; 1/4 Oz., 75c.

No. 1168. *Cosmos*—Orange.

Pkt., 10c; 1/4 Oz., 75c.

Daisy (Shasta Daisy)



SHASTA DAISY

This splendid hardy perennial grows two to two and one-half feet high and produces an abundance of showy flowers four inches in diameter with pure white petals and yellow centers on long, wiry stems. Blooms abundantly from

early summer until frost. A great favorite for borders, masses and cut flowers. Sow the seed in seed bed or cold-frame in fall or early spring. Transplant to permanent bed about six inches apart. The seed should be soaked in warm water before sowing.

No. 1004. *Shasta Daisy*—White Yellow Center.

Pkt., 10c; 1/4 Oz., 35c.

Datura (Trumpet Flower)



DATURA

These large-flowered annuals are related to the common Jimson weed. The flowers are trumpet shaped, white, yellow, or purple and sometimes six inches long. The flowers are often much doubled and their fragrance is delightful.

They prefer a light soil, a sunny sheltered situation and should be set at least 2 feet apart. Height about 3 feet. Seed can be started indoors early or in the open ground when frost danger is past. Cover seed to a depth of about 3 times its size. Press soil down firmly and when plants are

well established, thin out or transplant to prevent crowding. Give the plants plenty of room.

No. 1178. *Datura*—Mixed Colors.

Pkt., 10c; 1/4 Oz., 25c.

Delphinium

(Perennial Larkspur)

Beautiful, hardy, border perennials with noble, spikes of handsome flowers; very useful for cut flowers, etc. Sow in the spring or early in fall in seed beds or boxes and transplant when large enough. Delphiniums like plenty of sun. The soil should be rich, deeply prepared, a cool friable loam. Even hot, sandy soils, if watered and fertilized, will produce excellent results. Moisture will increase the size of the flowers and spikes. Cultivate the plants constantly with the hoe. Sow out of doors after danger from frost is over, in beds of finely pulverized soil, covering the seed to a depth of not over four times their size, with light soil; press down with a board; thin out as it becomes necessary. Transplant into permanent position as soon as the seedlings are large enough so that they can be thoroughly rooted or established before cold weather, or sow in the early fall, carry the plants over in a cold frame, and transplant to permanent position in the spring.

No. 1129. *Delphinium* *Balladonna*—A lovely turquoise blue, which is a continuous bloomer. Splendid for cutting. This is the tall Delphinium so often seen in beds and borders and as cut flowers in the florist shops.

Pkt., 10c; 1/8 Oz., 60c.

No. 1130. *Delphinium* *Bellamosa*—A rich deep blue in color and of the same type and habit of growth as the *Delphinium* *Balladonna*. The two grow beautifully together.

Pkt., 10c; 1/8 Oz., 60c.

No. 1157. *Delphinium*—Perennial mixed colors.

Pkt., 10c; 1/4 Oz., 50c.

Digitalis

(Foxglove)

The tall flower-stems of the Foxgloves are particularly attractive when seen growing among shrubbery or in bold masses along walks or drives. They are perennials, blooming the second year from seed, growing three to five feet tall and producing long spikes of large flowers in various colors. Seed may be sown in the



DIGITALIS

This Year MORCROP F

LILLY'S
MORCROP - B

2-10-2

A general mixed organic COMPLETE Fertilizer, high in available phosphates but low in price. This brand is a general favorite with berry growers in the valleys, with truck gardeners who fertilize several times each season and with general farmers who use it with stable manure.

All Three Needed: The experience of soil tillers in all parts of the world have been similar. No crop may be successfully grown without some of each of these three elements—Nitrogen, Phosphoric Acid and Potash though in varying proportions. As a rule soils are deficient in all, so far as availability is concerned, and all should be applied to the soil each year.

To summarize, each of the three elements, nitrogen, phosphoric acid and potash, needs the other two in order to function best, so that the proper assimilation of food by plants is dependent upon a properly balanced ration. The complete solution of fertilizer problems resolves itself into supplying the demand for the replacement of these three substances, together with the supply and replacement of humus.

Complete Fertilizers carry the three essential components—Nitrogen, Phosphoric acid and potash. Every type of soil has characteristic requirements. The ordinary farm crops, grain, hay, small fruits, etc., require different amounts to their plant-food requirements, but these two fundamental elements are found in all fertilizers. The cost per sack or ton should be the least, but buy the lowest priced fertilizer irrespective of how it is made. When purchasing fertilizers, study the percentage of each element in an analysis which appears suited to make up for any deficiency in the soil. The analysis of the fertilizer also meets the special need. It can tell you accurately just what analysis is most profitable. The analysis is best determined by yourself on your own farm by comparing the yield of an unfertilized strip in the field by which you can check the conditions and then observe the growth of the crop versus the fertilized vs. the unfertilized portion and also record the yield of the crop which was fed and that which was not fed. If the analysis of the fertilizer for your soil is not correct, change the analysis of fertilizer for your soil and observe.

LILLY'S
MORCROP - K

3-10-7

A concentrated COMPLETE fertilizer relatively high in the three necessary elements. Recommended for berries, grains and root crops. Some truck crops like Lettuce, Spinach, Onions and Corn respond especially well to it on certain soils. Especially good for Potatoes.

John Sulkoski, Route No. 3, Puyallup, Washington, an extensive Strawberry grower, says that Morcropaed Strawberries did not suffer from frost injury during last winter's cold snap because the plants secured enough food to mature properly, and that the abundance of foliage, undoubtedly had a lot to do with protecting the crowns. As proof of his convictions he has ordered more Morcropaed for his strawberries this season. He has Morcropaed his berries for three years and would not think of trying to grow strawberries without Morcropaed.

Each of these crop Formulas is a complete fertilizer containing Phosphoric Acid and Potash in proportionate to the requirements of different crops.

In addition to the other crops, a sack of Morcropaed will give you a judgment of men's experience in many years experience backed by the results of 40 years taken us over 40 years.

LILLY'S
MORCROP

3-10-

A COMPLETE fertilizer especially high in Phosphoric Acid. Some soils require Phosphoric Acid when root crops are raised. The shipping quality of root crops, getables, berries, etc., is greatly improved by the use of Phosphoric Acid especially useful in soils deficient in Phosphoric Acid. Stable manure.

ear Use Fertilizers

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LILLY'S MORCROP - L 5-6-8

A high nitrate COMPLETE Fertilizer; relatively high also in potash, desirable because of its concentrated form. Adapted for use on small fruits and garden crops on light soils and especially useful for hops, lawns, meadows and pastures.

Gould and Company at Burlington induced Mr. Culver Holt to test Morcrop for Potatoes on his farm near Burlington.

The Fertilized Acre produced 10½ tons Marketable Potatoes.

The Unfertilized Acre produced 8 tons Marketable Potatoes.

At \$25.00 per ton the returns were:

\$262.50 and \$200.00 respectively; a difference of \$62.50 in favor of Morcrop. Of this \$24.00 was used to buy the Morcrop leaving a net profit of \$38.50.

On ten acres the total net profit would have amounted to \$385.00.

Could YOU use an extra profit like this to advantage? And, does it pay to Fertilize?

LILLY'S MORCROP - X 6-10-7

A concentrated COMPLETE Fertilizer, many carloads of which are used by fruit growers in the Yakima, Wenatchee, Spokane and other tree fruit districts where soil requirements demand special treatment.

On S. E. McCaw's Ranch near Bellingham an application of half a ton of Morcrop on Golden Bantam Corn produced the following results:

	Yield of	
	Ears	Weight
Fertilized Acre.....	13,066	5,236
Unfertilized Acre....	9,790	3,656

Difference in favor
of Morcrop 3,276 1,580 lb.

3,276 ears equals 273 dozen at 35c
per dozen, equals\$95.55

Does it pay to fertilize?

The Morcrop cost \$25.00, leaving a net increased profit of \$70.55 or a net profit of \$2.82 on each dollar invested in Morcrop besides returning the dollar.

MORCROP paid \$2.82 interest on \$1.00 deposited for four months. The bank, at 3 per cent per annum on savings, would have paid 1c for the use of that same dollar for the same period of time.

Where do you deposit your Money?

NOTE:—Besides increasing the yield, the size and quality of the ears was much improved as indicated by the weight of the crop. Quality Produce commands a premium over average stuff and pays a larger profit.

Mr. McCaw is Secretary of the Whatcom County Farm Bureau.

This Year Use MORCROP Fertilizers

LILLY'S MORCROP-B

2-10-2

A general mixed organic COMPLETE Fertilizer, high in available phosphates but low in price. This brand is a general favorite with berry growers in the valleys, with truck gardeners who fertilize several times each season and with general farmers who use it with stable manure.

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Complete Fertilizers carry the three essential constituents: nitrogen, also known as ammonia, phosphoric acid and potash. Every type of soil has characteristic supplies of all three of these plant-food elements. The ordinary farm crops, grain, hay, small fruits, vegetables, forage and root crops, all differ as to their plant-food requirements, but these two fundamental facts must be kept in mind in purchasing fertilizers. The cost per sack or ton should be the last thing to consider. Too often, men are induced to buy the lowest priced fertilizer irrespective of how it meets the needs of their soils and of their crops. When purchasing fertilizers, study the percentage of nitrogen, phosphoric acid and potash and choose an analysis which appears suited to make up for any known weakness of your soil. Then see to it that the analysis of the fertilizer also meets the special needs of the crop to which it is to be applied. No one can tell you accurately just what analysis is most profitable to use on your soil for any definite crop. It is best determined by yourself on your own farm by actual test. The proper thing to do is to leave an unfertilized strip in the field by which you can check results. Choose an analysis most likely to suit your conditions and then observe the growth of the crop very closely and at harvest time measure the yields of the fertilized vs. the unfertilized portion and also record the difference in quality between that part of the crop which was fed and that which was not fed. If any characteristic weakness shows up on the fertilized part, change the analysis of fertilizer for your soil in accordance with the indications which you observe.

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3-10-7

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In addition to plant food each sack of Morcrop contains the best judgment of men who have had many years experience and is backed by the reputation it has taken us over 40 years to build up.

LILLY'S MORCROP-M

3-10-10

A COMPLETE Fertilizer with an especially high potash content. Some soils require this formula when root crops are grown and the shipping qualities of some vegetables, berries and grapes are greatly improved by its use. Especially useful in connection with stable manure.

LILLY'S MORCROP-L

5-6-8

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6-10-7

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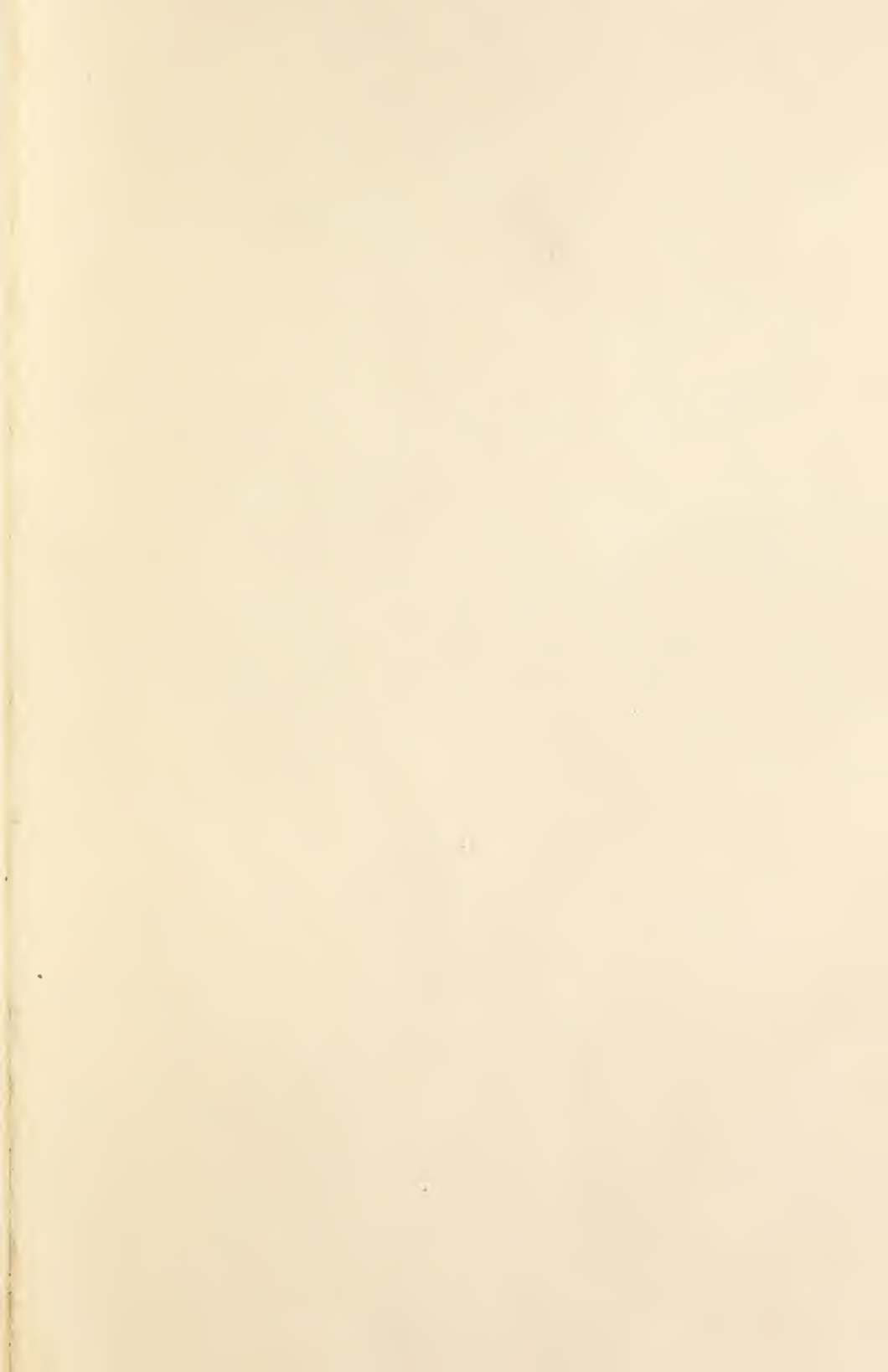
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Where do you deposit your Money?

NOTE:—Besides increasing the yield, the size and quality of the ears was much improved as indicated by the weight of the crop. Quality Produce commands a premium over average stuff and pays a larger profit. Mr. McCaw is Secretary of the Whatcom County Farm Bureau.



open ground in May and the plants transplanted to the permanent bed when large enough, or the next spring, setting them about two feet apart. When the center spike begins to fade it should be cut out and the side shoots will then grow more vigorously.

No. 165. Foxglove—Mixed colors.
Pkt., 10c; 1/4 Oz., 35c.

No. 1086. Foxglove—White Gloxinia-flowered.

Pkt., 10c; 1/4 Oz., 40c.

No. 1087. Foxglove—Pink Gloxinia-flowered.

Pkt., 10c; 1/4 Oz., 40c.

No. 1088. Foxglove—Bright yellow Grandiflora.

Pkt., 10c; 1/4 Oz., 50c.

Euphorbia Varigata (Snow on the Mountain)



EUPHORBIA

An annual garden plant growing two or three feet high bearing an abundance of beautiful green foliage, broadly marked with silvery-white and bearing small flowers. Very attractive and ornamental and can be planted as a back-

ground for lower plants or for use in mixed border. Seeds are best sown out of doors after frost is over in places where the plants are to stand. Plants prefer heat and full sunshine but will grow on rather poor soil. Of open free-branching growth, three feet in height.

No. 1126. Euphorbia Varigata—White.
Pkt. 10c; 1/4 Oz., 35c.

Eschscholtzia (California Poppy)



ESCHSCHOLTZIA

The Eschscholtzia is the state flower of California and an annual of striking character, both as regards the form and color of its flowers, which are bright and rich in their tints of yellow, orange and mixed colors. The plants average

about a foot in height, have attractive, silvery foliage, and produce their large poppy-like flowers quite lavishly from early spring until frost. They are most effective when grown in beds of considerable size, over which the seed may be thinly sown broad-

cast and lightly raked in. These sowings may be made early in spring, or late in autumn for earlier germination and bloom the next spring. The Eschscholtzia is also very useful as a pot plant and for cut flowers. In the garden they self-sow but do not transplant readily.

No. 192. Eschscholtzia—True California Poppy. Orange-yellow.

Pkt., 10c; 1/4 Oz., 25c.

No. 1089. Special Mixed Eschscholtzia—All colors.

Pkt., 10c; 1/4 Oz., 35c.

Gaillardia (Blanket Flower)

The Gaillardias are easily grown from seed. Sow seed in boxes during December or January and transplant when danger of freezing weather is past or sow seed in open ground in April.

They grow in a compact, bushy form, about two feet high and the same in breadth, bearing freely until late in fall, large, brilliant flowers in red and yellow blended and shaded, on long slender stems. Splendid for borders and cut flowers and should not stand closer than one foot apart. They do best in light, well-drained, fertile soil, fully exposed to sun and air.

No. 444. Single Gaillardia—Mixed colors.
Pkt., 10c; 1/4 Oz., 30c.



GAILLARDIA

Geum (Avens)

A pretty perennial of low growth sending up flower stems two feet long. The flowers are double and measure two inches in diameter; rich orange-scarlet. Plants are of easy culture and bloom profusely over a long period. They mix well with dwarf growing perennial border plants and are adapted to rock gardens. The Geum is a most excellent flower to use for bouquets. When the flowers are out they should be immediately immersed in water to prevent wilting.

Culture—Seed may be sown outdoors any time from early spring until fall. Blooms first year from seed if sown early. Pulverized soil, preferably light, sandy loam



GEUM

gives best results. Cover seed with fine soil about quarter of an inch deep and when plants are well established thin out or transplant to about eight inches apart.

No. 1131. *Geum*—Mixed colors.
Pkt., 10c; $\frac{1}{4}$ Oz., 75c.

Gypsophila

(Baby's Breath)

Hardy annuals and perennials growing one to two feet high and producing a profusion of small star-shaped flowers, mostly white; useful for hanging baskets and for mixing with bouquets. Sow seed of the annual varieties early in spring and at intervals for succession, either in beds, seed beds, boxes, or pots, and thin or transplant to about one foot apart. Seed of the perennial varieties may be sown in spring but it is better to sow in September and winter over in a cold-frame.

The name "*Gypsophila*" means Gypsum loving, therefore, these plants prefer limestone soil.

There are both annual and perennial varieties which are graceful and delicate, and of special value for mixing with other flowers in bouquets.

No. 925. *Gypsophila* Snowflake (*elegans alba pura*)—An improved large-flowering hardy annual variety, producing graceful sprays of pure white blossoms. Grows about two feet high.

Pkt., 10c; $\frac{1}{4}$ Oz., 20c.

No. 1090. *Gypsophila* *Elegans Rosea*—Soft pink. Hardy annual; two feet high.

Pkt., 10c; $\frac{1}{2}$ Oz., 35c.

No. 918. *Gypsophila* *Paniculata*—Hardy perennial. White; two feet high.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Godetia

(Evening Primrose—Satin Flower)



GODETIA

Free-blooming annuals, with widely opened flowers of satiny texture and delicate colors. Suited for beds or borders, for pots and to grow in shrubby borders in shaded places. They grow about eighteen inches high and bloom

from early spring until frost. Colors red, pink and white, shaded and blended. Seed should be sown in the open ground early in spring, in rather light or sandy soil, and thinned to one foot apart. They may be treated as biennials by sowing the seed in July and transplanting the young plants to a cold-frame, to be placed in the open ground the following May. If soil is very rich all foliage and no flowers will result.

They often self sow. Plants get leggy and weak if crowded for room. Plants should have a light mulch of manure for protection during winter.

No. 1141. *Godetia*—Double, mixed colors.
Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Heliotrope

Everyone loves the delightful fragrance and beauty of the *Heliotrope* but few know that it can be raised from seed easily.

To insure a long period of bloom the seed should be sown indoors during February and the plants set out, twelve inches apart in rich, well prepared soil when the danger from frost is past. They thrive in a sunny location and require plenty of water when in bloom. To encourage a bushy growth pinch back the young main shoots. Cover seeds but $\frac{1}{8}$ inch with fine, rich soil.

No. 1179. *Heliotrope*—Sweet scented.

Pkt., 10c; $\frac{1}{8}$ Oz., 40c.

Hibiscus

(Mallow Marvels)

The perennial Mallows bear some of the largest flowers of any of our perennials and present a glorious sight when in bloom. The flowers resemble single *Hollyhocks* excepting that they are much larger, six inches across a single bloom is not unusual. Colors range from white with crimson centers to deep crimson. Foliage is a grayish green and plants grow four to six feet high and require much room. Will bloom the first year from seed if started early indoors. They transplant readily and prefer moist soil. Set three feet apart. They open only in full sunlight.

No. 1167. *Hibiscus*—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Hollyhock

These too frequently neglected old-fashioned perennials are most pleasing and attractive when seen in groups or long rows against hedges or shrubbery as a background, and, in turn, form a very satisfactory background for plants of lower growth. Sow



HOLLYHOCK

in January under cover and transplant to

open ground as early as possible setting plants about eighteen inches apart or sow seed in September where plants are to remain. The plant is amenable to training, and if the tip of the main stalk is pinched off it may be kept at any desired height, and the side branches will then develop and form a bush.

No. 37. Double Hollyhocks, mixed—The best double perennial Hollyhocks in mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 1091. Hollyhocks, Blood Red—Double, perennial.

Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

No. 1092. Hollyhocks, Pink—Double, perennial.

Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

No. 1093. Hollyhocks, Black—Double, perennial.

Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

No. 1094. Hollyhocks, White—Double, perennial.

Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

No. 1095. Hollyhocks, Yellow—Double, perennial.

Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

No. 961. Hollyhock, Lilly's Annual—Everblooming. This splendid variety is a hardy annual, and if planted early will begin blooming in July or August. The diversity of forms and colors among flowers affords many delightful surprises. Some of the flowers will be densely double, other semi-double, and others single, all being of the most beautiful colors and shades.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Ice Plant (Fig Marigold)



ICE PLANT

This annual is a curious plant with thick leaves covered with glistening dots or ice-like globules. The flowers are white or light rose, but not showy. The plants are trailing or creeping and are seldom more than six inches tall. These plants are useful for rough spots in the garden where the soil is dry and the sun is very hot. Sow outdoors after the ground is warm. They require very little water. A very pretty and interesting plant for hanging baskets, rock work and edging.

No. 1180. Ice Plant—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Kochia (Burning Bush)

This most popular ornamental annual is also known as Summer Cypress. It is very quick growing, and may be sown in the open when the trees are coming out in leaf. The plants branch freely and are perfectly round. The foliage is fine and feathery and of clean, bright green color; early in the Fall the bush takes on a deep carmine hue and finally turns to a fiery red. Hardy annual, height 2 to 3 feet. A very attractive plant at all times.



KOCHIA

No. 1135. Kochia, Tricophilla—Flaming Red. Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

Lantana

An exceedingly popular and rapid growing bushy plant, bearing large heads of Verbena-like clusters of fragrant flowers in a wide variety of changing colors. The blooms are succeeded by a profusion of green berries which change to deep blue when ripe. Half hardy perennial 2 to 3 feet in height.



LANTANA

Culture—Seeds may be sown outdoors early in spring so that plants will bloom during late summer and fall or started in early fall plants will produce a profusion of blooms the following spring and summer. Flowers are orange, white, rose and other colors. Plants should have a light mulch of manure for protection during winter.

No. 1142. Lantana—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Larkspur (Delphinium)

The annual varieties are quite hardy, and the seed may be sown in the open ground in the fall, and will germinate very early in the spring, or it may be sown early in spring. The tall varieties are suitable for shrubberies and borders, and the dwarf varieties for beds. Either are splendid for cutting.



LARKSPUR

They bloom best in rather cool, moist soil. They should be thinned to stand six to eighteen inches apart, according to variety. There are also perennial varieties. Colors range from white to carmine, light pink, light scarlet, light blue and dark purple. They self sow.

No. 927. Larkspur, Dwarf Rocket—A splendid hardy annual Larkspur, growing only one foot high and producing large, double, hyacinth-like blooms in a variety of charming colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

No. 208. Larkspur, Tall Rocket—A tall hardy annual Larkspur, growing about two and one-half feet high, mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Linum

(Crimson Flax)



This is a very pretty dwarf annual. The rich crimson flowers last only a day, but they are borne continuously until frost. Makes a splendid subject for massing or may be planted as an edging. The annual Crimson Flax is truly beautiful and forms clumps in the border where the glowing flowers are a delight of gracefulness. It grows about a foot and a half tall with wide, open, glossy bright flowers. The seed is perfectly hardy and may be sown outdoors early in the spring. Thin the plants to stand 4 to 6 inches apart. A succession of bloom is obtained by sowing additional seed several times during the season.

No. 1143. Linum, Grandiflora Rubrum—Scarlet.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

Lavender

Perennial. Mostly grown for the sweet-scented flowers which, when dried, are placed in linen closets and wardrobes to impart their delicate perfume to the linen and clothing. Delightfully fragrant flowers from June to August. Lavender is generally cataloged as an herb, principally used for its aromatic properties. Sow the seed early in spring, in light, mellow soil and cover lightly. When plants are 2 or 3 inches high, thin to a foot apart. Plants attain immense size after a few years.

No. 2000. Lavender—Sweet scented.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Lobelia

These charming little half-hardy annuals grow four to six inches high, forming compact little bushes literally covered with small bright flowers. For beds, edgings, baskets and pots there is nothing prettier. The seeds may be sown outdoors in early spring, thinning or transplanting the young plants four or five inches apart. There are also tall, perennial varieties.



No. 195. Lobelia, Emperor William—A very dwarf, compact variety, covered with white, blue-margined flowers from June to November.

Pkt., 10c; $\frac{1}{8}$ Oz., 25c.

No. 1096. Lobelia, Sapphire—A trailing variety, bearing very large deep blue flowers with a pure white eye.

Pkt., 10c; $\frac{1}{8}$ Oz., 30c.

No. 196. Lobelia, Crystal Palace—Compact plants, dark foliage, and rich deep blue flowers.

Pkt., 10c; $\frac{1}{8}$ Oz., 30c.

No. 304. Lobelia, Erinus Hamburgia—A trailing Lobelia, for hanging baskets or window boxes. Large dark blue flowers.

Pkt., 10c; $\frac{1}{8}$ Oz., 40c.

Lupins

Free-flowering easily grown annuals, about two feet high, with long graceful spikes of rich and various colored pea-shaped flowers. Valuable for mixed borders, beds and for cutting. Does best in partial shade. As a border plant the Lupin is quite interesting; the cut flowers are exquisitely suitable for graceful bowl arrangements. Sow the seed where the plants are to remain as they are difficult to transplant. Thin so the plants stand at least a foot apart.



No. 46. Lupins—Annual, mixed colors.

Pkt., 10c; $\frac{1}{2}$ Oz., 20c.

Michaelmas Daisy

(Perennial Asters)

No special culture is necessary. Plant them and if given extra food and water they will repay us; if not they bloom beautifully to shame us for our neglect. Of

course, in the garden where neatness is necessary we do not stake the tall sorts. They seem to grow well either in full sun or partial shade. They are perennials and are easily started from seed planted after the soil has become thoroughly warm. The bloom period is the late fall when the clouds of bright colored blooms delight us. Height $2\frac{1}{2}$ to 4 feet. Very useful as cut flowers. No. 1081. Michaelmas Daisy—Mixed colors. Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Marigold (Tagetes)



There are two distinct types of these garden annuals. The French marigolds are the most compact and regular in growth, and are useful for bedding. The African Marigolds are better suited for planting in mixed borders or among trees and shrubs. The seeds of either type may be planted in the open ground in April, but earlier bloom may be had by starting the plants in the house. They transplant readily and often self sow. A favorite combination for the table is Marigold and Larkspur. When most other flowering plants are becoming dry and brown in the fall the Marigolds show up in all their brilliance. They succeed best in light soil with full exposure to the sun. Either variety is splendid for cut flowers.

No. 409. Marigold, Tall Double African—About two feet high with flowers three or four inches in diameter in shades of yellow and orange.

Pkt., 10c; $\frac{1}{2}$ Oz., 50c.

No. 410. Marigold, Tall Double French—The plants grow about one and one-half feet high. The colors and markings of the large double flowers, are very interesting, some being elegantly striped and spotted. Pkt., 10c; $\frac{1}{2}$ Oz., 40c.

No. 146. Marigold, Dwarf Double French—One foot high, with large flowers in mixed colors.

Pkt., 10c; $\frac{1}{2}$ Oz., 50c.

Mignonette (Reseda)



No garden is complete without a plentiful supply of this hardy annual. The seed can be sown outdoors at any time after the middle of April, and if planted at intervals of three weeks until August, its fragrant, modest colored flowers may be gathered until No-

vember. It grows about one foot high, and should be thinned to eight to twelve inches apart. Does not transplant readily and when moving is necessary a large ball of earth should be moved with the seedling. Disbudding induces long spikes and stems. Prefers the cool weather of spring and fall.

No. 139. Mignonette, Reseda Odorata—The old-fashioned, sweet scented Mignonette.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Mirabilis

(Marvel of Peru, Four o'Clock)

A perennial in warmer climates, but here it is treated as a hardy annual. It is a quick growing, erect, bushy herb, attaining a height of two or three feet and blooming during the late summer and autumn. The flowers are shaped like a Morning Glory, come in white, yellow, crimson and striped and open only late in the afternoon and on cloudy days. The seed should be planted in the hotbed or in the house in March and transplanted to the open ground in May, setting the plants about one foot apart. They sometimes manifest their perennial habit of developing tuberous roots sufficiently large to be lifted and stored like those of the Canna. They often self sow.



No. 51. Mirabilis Jalapa—Mixed colors. Pkt., 10c; $\frac{1}{2}$ Oz., 20c.

Myosotis

(Forget-Me-Not)

These dainty little flowers are hardy perennials, love cool, moist soils, and like pansies, bloom most freely in fall and early spring. They are good in borders, also satisfactory as winter - blooming plants in a cool room or cold-frame. Sow the seed in early spring in a warm, sunny border. They bloom freely in the first season and profusely the second year. They grow about six inches high, and the plants should stand six inches apart.



No. 310. Myosotis, Victoria Dwarf—A very beautiful hardy biennial variety; of dwarf, bushy habit, bearing large clusters of the brightest azure-blue flowers on long,

graceful stems, rendering them splendid for cutting.

Pkt., 10c; $\frac{1}{8}$ Oz., 35c.

No. 1054. Myosotis, Palustris—The true Forget-Me-Not. A hardy perennial of strong, sturdy growth with beautiful clear blue flowers.

Pkt., 10c; $\frac{1}{8}$ Oz., 75c.

Nasturtium



NASTURTIIUM

No other annual will produce such a profusion of flowers for so long a time with the same outlay of time and labor. They bloom profusely during the entire season from early summer until killed by frost, and will thrive almost anywhere, and under almost any conditions. They produce the best blooms if the soil is not too rich, and require very little moisture. Rich soil and too much water will produce luxuriant foliage at the expense of flowers.

The dwarf or Tom Thumb varieties have a neat, compact habit of growth, forming a small, round bush about a foot high, with attractive foliage, and a profusion of large flowers nestled in among the green leaves. The seed should be planted about one inch deep, after the weather is thoroughly settled in spring, in the position in which they are to remain. If the seed is planted thinly it will not be necessary to thin the plants, as they will stand considerable crowding. A few plants may be started in pots in the house in early spring and transferred to the open ground when warm weather has come to stay, if early blooms are desired.

Nasturtiums are not troubled with any disease or insect pests. The seeds and pods may be pickled, and the leaves are used like cress in salads.

No. 87. Lilly's Nasturtiums, Dwarf—Mixed colors. The choicest standard dwarf varieties and colors mixed. Splendid for beds and borders.

Pkt., 10c; Oz., 20c; $\frac{1}{4}$ -lb., 50c; 1-lb., \$1.50
All following varieties: Pkt., 10c; Oz., 25c.

No. 1068. Nasturtiums, King Theodore—Velvety red flowers; dark foliage.

No. 1070. Nasturtiums, Prince Henry—Light yellow marbled with scarlet.

No. 929. Nasturtiums, Queen of Tom Thumb—Rich, bright crimson flowers forming a pretty contrast to the silver variegated foliage. Splendid for bedding or pots.

No. 907. Nasturtiums, Dwarf Vesuvius—Deep salmon-rose; a beautiful shade.

No. 1112. Nasturtiums, Lady Bird—Orange, striped with bright scarlet.

No. 264. Nasturtiums, Empress of India—Fiery crimson flowers; compact plant with very dark foliage.

No. 911. Nasturtiums, Dwarf Chameleon—All colors borne on each plant.

No. 1071. Nasturtiums, Dwarf Ivy Leaved—Mixed colors. Deep green leaves of distinctive ivy form; flowers beautifully fringed.

No. 1067. Nasturtiums, Golden King—Rich golden-yellow.

No. 1069. Nasturtiums, Crystal Palace Gem—Sulphur-yellow spotted with crimson.

Nemophila

(Baby Eyes)

These small, dainty annual plants from California are of a spreading habit and the leaves are pale green, deeply cut and slightly hairy. The flowers are cup-shaped, white, and blue with white centers. The plants grow a foot tall and are profuse bloomers throughout the summer. Excellent for edgings and low groups in the border. They are best grown in partial shade and moist soil and their long season of bloom commends them for every garden. Sow the seed in the open in April where the plants are to remain and thin to 6 or 8 inches apart.



NEMOPHILA

No. 1145. Nemophila—Mixed colors.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c

Nicotiana

(Flowering Tobacco)

The evening fragrance of *Nicotiana* is most delightful; in addition the flowers are attractive in form and color which ranges from creamy white and pink to violet and crimson. The flowers are borne in great profusion on long stems. The foliage is abundant and forms a cluster about the base of the plant. They are slender in growth and show off best with a background of taller plants. The seed is very tiny and should be sown carefully. The seedlings make slow growth unless started in hotbed or sunny window. The soil should be rich and well pulverized.



NICOTIANA

Height about three feet, plant to stand a foot apart.

No. 1146. *Nicotiana, Sanderae*—Mixed colors.

Pkt., 10c; ½ Oz., 25c

Nigella

(Love-in-a-Mist. Devil-in-a-Bush)



NIGELLA

Compact, free flowering hardy annuals growing in bush form about one foot high. The foliage is finely cut and the flowers and seed pods are unique. Sow the seed outdoors after danger of frost is past, and at intervals during the summer for succession. For early blooms the plants may be started indoors early in spring, or the seed may be sown in fall and the plants wintered over in a cold-frame. They often self sow, however, and the plants begin to bloom when quite small.

No. 248. *Nigella, Damascena*—Blue and white.

Pkt., 10c; ¼ Oz., 25c.

Pansy



PANSY

The pansy is a hardy perennial, requiring a cool, moist climate, and for that reason attaining the highest state of perfection west of the Cascades, where the largest and brightest blooms are produced in the greatest profusion and continuously from early spring until late in the fall. It is a favorite with everyone, and gives satisfactory results with a moderate amount of care. For early outdoor bedding, the seed is sown late in August or early in September in rich garden soil, in a cool location, and as soon as the plants are large enough to handle they are transplanted four inches apart in cold-frames.

Satisfactory results for the home garden, although not as early blooms, may be had by sowing the seed in cold-frames in early spring, so that they will have a good root system before hot weather.

There are four essentials for best results. First, good rich, loamy soil that will hold moisture well. Never allow the beds to become dry. Any dryness after the seeds sprout is absolutely fatal. Second, frequent cultivation, to keep a dust mulch on the surface and to allow circulation of air in

the soil. Third, to pick all blossoms as soon as they are past their prime as they will be larger and more perfect as the season advances if seed-pods are not allowed to form. Fourth, plant in a cool position. Frequent applications of Morcrop, cultivated into the soil, will be very beneficial.

No. 89. *Pansy, Fine English*—Finest varieties and colors of English Pansies Mixed. The plants are of compact habit.

Pkt., 10c; ¼ Oz., 50c.

No. 90. *Pansy, Giant Flowered French*—A fine mixture of large flowering French varieties.

Pkt., 10c; ¼ Oz., 60c.

No. 92. *Pansy, Giant Trimardeau*—Mixed colors. A splendid type of immense size, distinct shape and beautifully marked. The plants are deep rooted, enabling them to withstand drought, hardy and robust.

Pkt., 10c; ¼ Oz., 60c.

No. 94. *Pansy, Beaconsfield*—A very large Pansy, with upper petals light lavender and lower petals purple.

Pkt., 10c; ¼ Oz., 60c.

No. 203. *Pansy, Emperor William*—Dark navy blue; of large size and very showy.

Pkt., 10c; ¼ Oz., 60c.

No. 95. *Pansy, Snowflake*—Large Satiny-white flowers with light centers.

Pkt., 10c; ¼ Oz., 60c.

No. 178.—*Pansy, Faust, or King of the Blacks*. Very large and very dark, almost black.

Pkt., 10c; ¼ Oz., 60c.

No. 429. *Pansy, Goldelse, or Yellow Gem*. Pure golden-yellow; large.

Pkt., 10c; ¼ Oz., 60c.

No. 1147. *Pansy, Maroon, as named, very large*.

Pkt., 10c; ¼ Oz., 60c.

No. 930. *Pansy, Lilly's Colossal Mixture*—Is a splendid mixture of the choicest large-flowering varieties and the most beautiful colors and markings.

Pkt., 10c; ¼ Oz., 50c.

Petunia

A tender perennial, of several distinct types variously adapted for greenhouse and pot culture and for open air. The seed should be sown in March, in a gentle hotbed, cold-frame, or in a box in the house, and the seedlings transplanted about a foot apart, in rich garden loam, after all danger of frost is past, and the ground has become thoroughly warmed. The seed should not be covered as most other seeds, but should be merely sown on



PETUNIA

the surface, and pressed slightly into the soil. The double varieties are more difficult to grow than the single varieties.

No. 61. *Petunia, Choice Single*—A choice mixture of fine single varieties and colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 1148. *Petunia, Giants of California*—Special strain of this favorite new type flower, mixed colors.

Pkt., 25c; 1-32 Oz., \$3.50.

No. 1149. *Petunia, Double Giants*—Full and double, deeply fringed and waved, none finer on the market, mixed colors.

Pkt., 25c; 1-16 Oz., \$4.00.

Pinks (Dianthus)



The large and varied genus of *Dianthus* contains some of our most beautiful flowers. The most of them are hardy perennials that bloom freely the first season, the plants remaining green all winter and blooming the next year

if protected by a mulch. Old plants flower the earliest, but as young ones give the best flowers, new plants are usually grown each year. Seed is sown in the hotbed or in the house in March, and the young plants transplanted out of doors, six to ten inches apart, in May. They do best in a well-drained bed made up of turfy loam, leaf mold, and well-rotted manure, thoroughly mixed. They will not stand too much moisture, and are more liable to winter-kill from being planted in a wet place than from cold.

No. 288. *May Pinks*—The old-fashioned single flowered garden or border Pink. They are hardy annuals, and will flower the first season from seed sown outdoors in spring. Height, one foot, mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 40c.

No. 1150. *Chinese Pinks*—Double mixed. They are strong growers and unexcelled for borders, beds or for cutting. 10 to 16 inches high.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Perennial Phlox

(*Decussata*)

A very handsome variety of *Phlox* quite different from the annual. The individual flowers are large and borne in immense heads on tall stems. They flower during the summer and fall and come up from the old roots in the spring. Seed may be sown in spring or fall. Extra choice mixture.

No. 1133. *Phlox, Perennial*—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 75c.

Phlox

The annual *phlox*, sometimes called flame flower, is particularly useful and attractive when grown in masses or ribbon beds of contrasting colors. Few annual plants are more easily grown from seed, give a quicker return of bloom, or offer such a variety to choose from as do the *phloxes*. There are few desirable colors beyond their range, and if given good soil and plenty of water they furnish a supply of delicate flowers for cutting throughout the season. They are also useful in the window garden, and as undergrowth for tall, bare-stemmed plants. The first sowing of seed should be made very early in spring, and later ones in May, either where the plants are to bloom or in a seed bed as the *phlox* transplants readily. In transplanting, set the taller kinds about a foot apart; if planted too thickly they suffer from mildew. The removal of flowers and seed-pods makes the plants more bushy and compact and lengthens their blooming period. The tall varieties grow about twelve inches high; the dwarf varieties about six inches.



No. 919. *Lilly's Large Flowering Phlox*—(*Phlox Drummondii Grandiflora*.) This is the finest type, having the largest heads of bloom and the largest individual flowers. This mixture contains all the most beautiful colors and shades. Fifteen inches high.

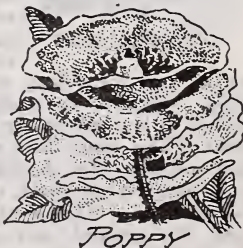
Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 67. *Phlox, Drummondii*—Flowers are not so large as those of the *grandiflora* type, but just as bright and free blooming. Fifteen inches high, mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Poppy

No other plants possesses so bold and brilliant a flower, coupled with the same grace of stem, airiness of poise, delicacy of tissue, and earliness and continuity of bloom as the poppy. For beds and borders, with a



background of green, there is nothing which will produce a more striking contrast. A sandy loam suits them best, and as their strong tap-roots are difficult to transplant, it is well to sow the seed where the plants are to bloom. The seeds should be sown thinly,

covered very lightly, and the young plants thinned to one foot apart. A long succession of flowers may be had by planting the seed in the fall and at intervals during the spring.

No. 314. Shirley Poppy.—A charming hardy annual with large fluted and crinkled flowers in a variety of forms and colors.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

No. 58. Umbrosum Poppy.—Rich vermilion flowers with a black spot on each petal. Hardy annual.

Pkt., 10c; $\frac{1}{4}$ Oz., 40c.

No. 341. Iceland Poppy.—This is a hardy perennial, but will bloom the first year from seed. It bears a profusion of graceful, delicate, single flowers with petals like tissue paper. Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 1030. Oriental Poppy.—Mixed Hybrids. Hardy perennials, producing immense flowers in gorgeous colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 351. Mixed Poppies.—A choice mixture of hardy annual varieties.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

No. 1114. Flanders Poppy.—Bright scarlet. The Memorial Poppy from the fields of Flanders.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 1151. Poppy, Double.—Mixed annuals.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

Portulaca (Sun Plant)



PORTULACA

This bright flowered, thick-leaved annual is unrivaled for brilliancy among plants of low growth. It flourishes under extremely adverse conditions, even in hot sun and light soil and with sparse water supply. It is satisfactory for beds, edgings and rock-

work, and for filling up spaces in flower beds, also as an undergrowth for taller plants. It is particularly useful in the Northwest. The seed does not germinate until hot weather, and should be sown late. Beyond sowing the seed, no care or attention is required. The seed should be pressed into the ground, not covered. Desirable for beds, embankments or rockeries. Predominating colors are clear yellow, white, scarlet, crimson, orange and rose.

No. 69. Portulaca, Single.—Mixed colors. Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

No. 70. Portulaca, Double.—Mixed colors. Pkt., 10c; $\frac{1}{4}$ Oz., 50c.

Primrose (Primula)

These half-hardy perennials are splendid for winter and spring decorations in the home or conservatory. The hardy varieties are used for beds and borders and may be handled in the same manner as pansies.



PRIMROSE

Culture.—Sow seed indoors in boxes from April to July to insure flowering the following winter. Cover seeds very lightly with finely pulverized soil. When seedlings are well up, transplant to other boxes or pots and keep in a cool place. Plants thrive best in a mixture of leaf mold, sand and loam. Seed may also be sown in fall.

No. 75. Primula Veris.—A beautiful hardy perennial, growing six inches high, and bearing clusters of fragrant flowers in various colors.

Pkt., 10c; $\frac{1}{8}$ Oz., 75c.

Pyrethrum

Single flowering hybrid Pyrethrum, popularly called Painted Daisies because of the many shades of rose, flesh, pink, white, crimson, etc., in which its daisy-like flowers are produced. Blossoms are large, often 3 to 4 inches across, borne in profusion on stems about 2 feet long. They remain in bloom a long time.



PYRETHRUM

Culture.—Seeds may be sown outdoors early in spring, so that plants will bloom during late summer and fall or started in early fall plants will produce a profusion of blooms the following spring and summer. Plants should have a light mulch of manure for protection during winter.

No. 1187. Pyrethrum, Hybridum Single.—Mixed colors.

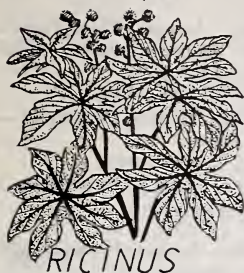
Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 76. Pyrethrum, Parthenifolium Aureum.—One of the best plants for edging, grown for its beautiful yellow foliage. Known also as Golden Feather, it is a hardy perennial, but is generally grown as an annual. Six inches high.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Ricinus

(Castor Oil Bean)



A tall, majestic, foliage plant with broad, ornamental palm-like leaves of glossy green or bronzed metallic hue and long spikes of scarlet or green. Grown singly it forms a picturesque pyramid of gorgeous leaves, which together with its

brilliantly colored seed pods, makes of the whole a truly tropical picture. Height, 6 to 15 feet.

Culture—Sow seed 2 inches deep during late spring or early summer, or plants may be started indoors early in the year. Set out or transplant to about 4 feet apart.

No. 140. Castor Oil Bean.

Pkt., 10c; Oz., 25c.

Rudbeckia (Purpurea)

A beautiful showy, hardy perennial, producing an abundance of large, handsome, crimson-purple flowers with dark central disc. Good for massing, growing 3 to 5 feet high. Blooms from early summer till late fall and often, after through blooming, if plants are cut back and kept well watered they will produce a second bloom. These flowers are fine for cutting. The leaves are large and thick. They will tolerate dry, sun-baked locations, but are better in good soil. Wait until the soil is good and warm before planting the seed. When 2 inches high, thin to 6 inches apart. Seed can also be sown in fall. There are usually no flowers until the second season, unless started very early under glass and transplanted when blooms may be had in autumn. Old roots may be divided and reset each spring.

No. 1169. Rudbeckia—Purple cone flower.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Salpiglossis

(Painted Tongue)



Very showy half-hardy annual bedding or border plants growing two to three feet high and bearing richly colored funnel-shaped flowers. For early bloom, plants should be started indoors in March and transplanted to the bed, one foot

apart, when the weather is warm and set-

ted. Seed may be sown outdoors when danger of frost is past. The seeds are extremely fine and should be planted with care. If the centers of the young plants are pinched out it will cause them to branch. Sandy soils are best suited to Salpiglossis, but they do well in partial shade. Desirable for bouquets as the blooms keep well in the water after being cut.

No. 406. Salpiglossis—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 35c.

Salvia

(Flowering Sage)

Half hardy perennial, blooming the first season. One of the most stunning and brilliantly colored of all garden flowers. Their compact bushes are literally ablaze with brilliant, intense scarlet spikes, often 8 to 12 inches long, from midsummer until the late fall. Height, about 3 feet.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established, thin out or transplant to prevent crowding. If started indoors, young plants should be transplanted to the open after ground has become warm and the weather thoroughly settled.

No. 920. Salvia Splendens.

Pkt., 10c; $\frac{1}{4}$ Oz., 60c.

Scabiosa

(Mourning Bride)

Quite hardy plants, flowering freely in cool locations or during the late summer and fall months. The seed should be sown thinly in shallow drills early in spring when the trees are starting out in leaf. When well started, thin



out or transplant to stand 6 inches apart. The tall sorts form compact, rounded plants of dark green foliage, 8 to 10 inches in height. The flowers are borne on tall, slender, but quite stiff stems, nearly 2 feet in height, and are of fine rounded, full-centered form, composed of small tubular petals from which project the small pistils, giving them a feathery appearance. These are succeeded by curious hairy seed-pods. The dwarf varieties are similar in growth, but the flower-stems attain only one-half the height. Its great succession of richly colored blossoms, borne on long stems, make it one of the most decorative of all

garden flowers. Blossoms last for about a week after being cut.

No. 1134. *Scabiosa*—Double, mixed.
Pkt., 10c; $\frac{1}{4}$ Oz., 20c.

Schizanthus

(Poor Man's Orchid)



SCHIZANTHUS

When in full flower, the foliage is practically hidden by the innumerable butterfly-like blooms which range in color from pure white through shades of cream and pink to crimson and mauve. These make excellent pot plants. Sown early in January

in rich soil they will form large, compact bushes over 2 feet high, completely covered with beautiful small flowers. Easily forced in a cool greenhouse during winter time. They do not transplant readily. It is, therefore, wise to move the seedlings while young with a considerable amount of earth. The plants naturally grow straggling and should be pinched back to make them bushy. Thrives best when situated in a slightly sheltered location.

No. 1152. *Schizanthus*, *Wisetonemis*—Mixed colors.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

Stocks

(*Matthiola*)



STOCKS

The plants are vigorous, have a good habit of growth, fragrant flowers in various colors, are adapted to bedding, edging, pot culture, house or conservatory use, and are splendid for cutting. They are hardy annuals,

grow about two feet high and should be planted about one foot apart. For early blooms, the seed should be sown in the hot-bed or in the house, in March, and when the plants are one inch high they should be transplanted to another part of the hot-bed. Frequent transplanting during their early growth will give them a more dwarf and compact habit. They may be planted in the open ground early in May. Seed may be sown outdoors in May, and will produce blooms in July or August. If plants that began to bloom late are carefully lifted and potted in the fall, they will flower freely in a house or room that is rather cool and moist. Stocks enjoy a well-enriched soil thriving best in cool moist

locations. Pinching back some of the plants makes them branch and lengthens the period of bloom.

No. 84. *Stocks*, Large Flowering—Dwarf Ten Weeks, mixed colors. Half hardy annual, 1 foot high.

Pkt., 10c; $\frac{1}{8}$ Oz., 35c.

No. 1107. *Stocks*, Large Flowering—Dwarf Ten Weeks, white.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

No. 1108. *Stocks*, Large Flowering—Dwarf Ten Weeks, flesh-pink.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

No. 1109. *Stocks*, Large Flowering—Dwarf Ten Weeks, crimson.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

No. 1110. *Stocks*, Large Flowering—Dwarf Ten Weeks, light blue.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

No. 1111. *Lilly's Annual Stocks*, Special Mixture—Choicest varieties and colors of annual Stocks.

Pkt., 10c; $\frac{1}{8}$ Oz., 35c.

Sunflower

(*Helianthus*)

These tall-growing, bright flowered annuals have suffered the misfortune of having been cheapened by use as a burlesque. They are in reality very useful for backgrounds, or even for bedding. The tall, single variety, with but one immense flower on a plant, with which we generally associate the name is only one of the many varieties. The dwarf, double, many-flowered varieties are really useful and artistic when skillfully employed. The seed should be planted in the open ground about the middle of May, and the plants thinned to stand two to four feet apart, according to whether dwarf or tall.

No. 128. *Dwarf Double Sunflower*—This is a very double variety, growing about four feet high.

Pkt., 10c; 1-Oz., 35c.

Sweet William

(*Dianthus Barbatus*)

Well known, attractive, free-flowering, hardy perennials, producing splendid effects in beds and borders. Sow the seed outdoors early in spring in seed bed for permanent bed, transplant or thin the plants to about six inches apart; or the seed may be sown in fall, and the plants wintered over in a cold frame. Although they are perennials, flowers will be produced the first summer, and the best results will be had by growing new plants each year. Colors are white,



SWEET WILLIAM

the various shades of pink, rose, crimson, etc., many with penciled and colored centers.

No. 26. Sweet William, Single—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

No. 27. Sweet William, Double—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Verbena



The Verbena is a low-growing, creeping, half-hardy perennial usually treated as an annual, and is useful in beds, borders, mounds, window boxes, and for bouquets and table decoration. The seed should be

sown in March, in the hot bed or in the house, and the plants transplanted outdoors after all danger of frost is past, setting them ten to fifteen inches apart in well-drained garden soil and a sunny position. They are suitable flowers for ground covering and make good masses in the border. As cut flowers they are attractive when loosely arranged in low bowls and vases. It is well to pinch back the plants when young to make them branch. Keep the flowers cut or they stop blooming when seed formation starts.

No. 1154. Verbena, Special Giant—Mixed colors. These are the latest introductions.

Pkt., 10c; $\frac{1}{4}$ Oz., 50c.

No. 88. Verbena, Giant Hybrid—A splendid mixture of large flowering varieties; all colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 50c.

Violet

These little hardy perennials are unexcelled for beds, borders, and rock work. On account of its delightful fragrance, beautiful coloring and dainty appearance is unequalled for cutting. Grow about 4 inches high.

Culture—Seeds may be sown outdoors early in spring, so that plants will bloom during late summer and fall or started in early fall plants will produce a profusion of bloom the following spring and summer. Plants should have a light mulch of manure for protection during winter.

No. 319. Violet, Large Single.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

No. 1106. Viola Cornuta—Tufted Pansy, Violets, mixed colors.

Pkt., 10c; $\frac{1}{8}$ Oz., 50c.

Wall Flower

Well-known, deliciously fragrant, half-hardy perennials, producing spikes of beautiful flowers early in spring. Plants are bushy, growing to a height of 1 to 3 feet, foliage is dark green and flowers are borne on tall, graceful spikes. The seed should be sown early in the fall, the plants wintered over in a cold-frame and set out when danger of hard frost is past in spring.



No. 98. Wall Flower, Double—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 40c.

No. 99. Wall Flower, Single—Mixed colors.

Pkt., 10c; $\frac{1}{4}$ Oz., 25c.

Wild Flower Garden

A combination of 15 to 20 different hardy annuals which will produce an abundance of blooms all summer. Desirable for out of the way corners or semi-wild spots. Sow the seed broadcast during March or April or May, after the ground has been put in good cultivation, and the effect will be most pleasing. Also effective for large window boxes.

There are few things more pleasing than a wild-flower garden hidden away in some secluded spot or among shrubbery. This mixture is ideal for the purpose, being composed of such hardy annuals as will require little care beyond scattering the seed, and will produce a great profusion and variety of pretty flowers.

No. 438. Wild Flower Garden.

Pkt., 10c; 1-Oz., 25c; Lb., \$2.00

Zinnia

(Youth and Old Age)

A half-hardy annual, growing about eighteen inches high, and producing a multitude of large, double flowers of a great variety of colors and shades, valuable for groups, beds, borders, or hedges, and for bouquets. The colors are soft but glowing and include



rose, orange, crimson, scarlet, yellow, salmon and purple. The seed should be sown in the open ground in early spring and the

plants thinned to two feet apart. They will be at their best in August, and will continue to bloom until late in the fall. Place the plants in well enriched soil and working some fertilizer deep down under the plants is well repaid. Desirable for bouquets as the stems are long and stiff and blooms keep well after being cut. They are most effective in masses.

No. 933. Zinnia, Giant Mixed—A choice mixture, including the best and largest types, producing plants of handsome, compact form, and immense, perfectly formed, double flowers in brilliant mixed colors.

Pkt., 10c; ¼ Oz., 25c.

No. 100. Zinnia, Mixed—A splendid mixture of good varieties.

Pkt., 10c; ¼ Oz., 25c.

No. 1155. Double Giant Zinnia—Golden yellow.

Pkt., 10c; ¼ Oz., 50c.

No. 1156. Double Giant Zinnia—Lavender.

Pkt., 10c; ¼ Oz., 50c.

No. 1157. Double Giant Zinnia—Pink.
Pkt., 10c; ¼ Oz., 50c.

No. 1158. Double Giant Zinnia—Crimson.

Pkt., 10c; ¼ Oz., 50c.

No. 1186. Double Giant Zinnia—White.
Pkt., 10c; ¼ Oz., 50c.

No. 1182. Double Giant Zinnia—Canary yellow.

Pkt., 10c; ¼ Oz., 50c.

No. 1164. Zinnia, Cactus or Quilled—Mixed.

Pkt., 10c; ⅛ Oz. 40c.

No. 1159. Dahlia Flowered Zinnia—Golden.

Pkt., 25c; ⅛ Oz., \$1.00.

No. 1160. Dahlia Flowered Zinnia—Pink.

Pkt., 25c; ⅛ Oz., \$1.00.

No. 1161. Dahlia Flowered Zinnia—Crimson.

Pkt., 25c; ⅛ Oz., \$1.00.

No. 1162. Dahlia Flowered Zinnia—Lavender.

Pkt., 25c; ⅛ Oz., \$1.00.

Everlastings

The Everlastings or Straw Flowers, with their rich, bright colorings, are most valuable for winter decorations.

Picking—With but few exceptions the Everlastings are cut before they are fully open because in many cases it is the outside involucre which is straw-like and retains its color when dried. Allowed to open fully, *Helichrysum* and *Acroclinium* are not as attractive because the centers of the flowers turn brown.

Drying—In preparing these flowers for drying the leaves should be stripped from the stems; they are then assembled in bundles and hung up-side-down. If the stems are held together with rubber bands none of them will drop out of the bundle as they shrink from drying. It is best to dry the flowers quickly in a dark place and store them in a dry place until they are to be used.

Acroclinium



ACROCLINIUM

This is one of the smaller, daintier, annual everlastings growing 12 to 15 inches tall and bearing pink or white double daisy-like flowers with golden centers in great abundance. The plant is attractive in the garden and also useful as a source of cut flowers. To secure bright, attractive flowers when dried, flowers should be gathered the first day they open.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established, thin out or transplant to prevent crowding.

No. 1137. Acroclinium, (Everlasting)—White and pink mixed.

Pkt., 10c; ¼ Oz., 25c.

Gomphrena (Globe Aramant)

Entirely different in appearance from any other everlasting flower, and very attractive. Has a globe-shaped flower.



GOMPHRENA

The tiny Clover-like flowers of this plant may be aramant (true purple), white, or rose in color. The plants are annual and grow one to two feet tall. When fully developed cut and dry the flowers for winter bouquets. In the garden these flowers are most attractive when planted among white flowers which heighten their color by contrast. They do not blend well with other colors. Also good for fresh cut flowers. Plants should be set a foot apart.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well establish-

ed, thin out or transplant to prevent crowding. If started indoors, young plants should be transplanted to the open ground after it is warm and the weather thoroughly settled.

No. 1117. *Gomphrena*, (Everlasting)—Mixed colors.

Pkt., 10c; ¼ Oz., 25c.

Helichrysum (Strawflower)



HELICHRYSUM

The Strawflower is the largest and showiest of the annual Everlastings. The large double flowers range from white to yellow, crimson, pink, rose, chestnut and rich purple. The plants grow two to four feet tall. Remember to cut the blooms before they are fully open as even the small, undeveloped buds will open while drying. It is best to start the plants early indoors and transplant to the garden a foot apart when the weather has settled. They are attractive when grown in beds in the garden and keep well as cut flowers or dried for winter bouquets. The darker shades are the most showy when dried.

No. 1116. *Helichrysum*, (Everlasting)—Mixed colors.

Pkt., 10c; ¼ Oz., 35c.

Rhodanthe

(Swan River Everlasting)



RHODANTHE

The *Rhodanthe* is one of the slender-stemmed annual Everlastings. The flowers are rather bell-shaped, pink and white, and smaller than those of *Helichrysum*. The plants grow a foot tall and are dainty and graceful, but not showy. For small basket and vase arrangements during the winter these little flowers are charming. The flowers hang like little bells on the stems and make a pleasing and dainty cut flower either fresh or dried. Native of Western Australia, pink, white and dark red shades. One of the most graceful of all Everlastings. The *Rhodanthes* are lovers of hot weather. When blooms are cut before being fully expanded and dried in the shade, they will retain their colors for years. Extensively used for winter bouquets. The seed, if sown outdoors, should be planted only when the soil and

air are warm. It is better not to move the plants but to thin them to stand six inches apart.

No. 1138. *Rhodanthe*, (Everlasting)—Mixed colors.

Pkt., 10c; ¼ Oz., 30c.

Statice

(Sea Lavender)



STATICE

Statice is a popular perennial Everlasting growing two and a half feet tall. Extensively used for rockeries and borders, the panicles of the graceful minute flowers of the "everlasting" type, can be dried and used for winter bouquets. Flowers are purple, yellow or white. The *Statice*s lend the same grace to a bouquet as does *Baby's Breath* as the flowers are small and are produced in great profusion in a mist-like mass of airy gracefulness. They are most effective if combined with other straw flowers in bouquets. They thrive in warm, light soils. Sow seed thinly in hotbed or sunny window, just deep enough to cover the seed. Transplant carefully and exercise care in watering. Stems are often weak and require staking. Allow the flower to dry on the stems before cutting.

No. 1139. *Statice*, (Everlasting)—Mixed colors.

Pkt., 10c; ⅓ Oz., 25c.

Xeranthemum

(Immortelle)



XERANTHEMUM

An interesting everlasting with purple, lavender, pink and white flowers growing two feet tall and bearing its blooms in clusters. Plants remain in bloom from early summer until late in fall and are at all times very effective. When blooms are cut before being fully expanded and dried in the shade they will retain their color for years. They are greatly prized for winter bouquets. As the foliage is light, silvery green the plants are interesting in the garden as well as for cutting. Sow in the open late in March or early April. Thin the plants to stand eight to ten inches apart.

No. 1140. *Xeranthemum*, (Everlasting)—Mixed colors.

Pkt., 10c; ¼ Oz., 35c.

Annual Vines

One often desires a vine to shade a porch or hide an unsightly fence and one that will grow quickly. It is at such times that the value of annual vines is appreciated.

There are coarse sorts and dainty ones—types for every use. Among the most popular are those described below.

Canary Bird Vine



CANARY BIRD VINE

This is a rapid growing annual vine with canary-yellow blossoms resembling a bird with wings half expanded. The flowers are arranged in sprays. The plant is used to cover trellises, arbors and to screen unsightly places. Except for its deeply cut petals and lobed leaves its foliage resembles Nasturtiums.

Start the plants indoors in February, move them into individual pots as soon as large enough and transplant outdoors after all frost danger is past. Can also be started outdoors in the late spring. Rapidly reaches a height of 15 feet in warm weather.

Sow the seed in light, rich soil, where it will get plenty of sun, allowing plants to stand about 8 inches apart. Blooms from June to November.

No. 148. Canary Bird Vine, (*Tropaeolum*) yellow.

Pkt., 10c; 1/2 Oz., 25c.

Cardinal Climbers



CARDINAL CLIMBERS

The Cardinal Climber is a vine of great charm because of its fiery, cardinal-red, Morning Glory like flowers. The flowers are about 1 1/2 inches in diameter and borne in clusters. The leaves are deeply laciniated, resembling those of a fine Japanese Maple. The vines grow 15 to 25 feet and are covered with scarlet flowers all season long. The seeds had best be soaked in tepid water for a day before planting.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established thin to 1 foot apart. Plant delight in a sunny situation along fence or trellis.

No. 1127. Cardinal Climber—Crimson scarlet.

Pkt., 10c; 1/8 Oz., 45c.

Cobaea

(Cup and Saucer Vine)



COBAEA SCANDENS

This rapid growing vine is most attractive. Although not an annual it is so treated in the north. The vines attain a height of 30 feet. The dark color and refined character of its foliage, together with its bell-shaped flowers, render it a very satisfactory vine for covering broad areas. The flowers are not conspicuous, because of their modest colors and because they are hidden by the foliage, their form, however, is pleasing and they, unlike the moonflower, are open during the day. Blossoms are green at first, but change rapidly to a beautiful violet blue. They are followed by plum-shaped fruits. Sow the seeds indoors late in March, one to a pot. Press them into the soil edgewise, as they are large and flat, and germinate poorly when placed broad side down. Transplant when frost danger is past into very rich soil. Thrives best when watered freely.

No. 120. Cobaea Scandens—Purplish blue.

Pkt., 10c; 1/4 Oz., 25c.

Cypress Vine

This is one of the daintiest of vines, having fine, fern-like foliage and being dotted with small, star-shaped flowers—orange, scarlet and white in color. Very desirable for covering small ornamental trellises on account of its graceful foliage. Quite satisfactory also for growing indoors during the winter months. Grows 15 to 20 feet high.



CYPRESS VINE

The seeds should be scarified by cutting or filing the shell and soaked in warm

water before planting because the shell is so hard that germination is slow or doubtful otherwise. Thrives best in light soil and sunny exposure.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established, thin out or transplant to prevent crowding. If started indoors, young plants should be transplanted to open after ground has become warm and the weather thoroughly settled.

No. 1185. Cypress Vine—Mixed colors.
Pkt., 10c; ¼ Oz., 25c.

Echinocystis (Wild Cucumber)



ECHINOCYSTIS

The Wild Cucumber is one of our fastest growing vines. Splendid for a quick, temporary covering for trellises, fences, stumps, etc. The foliage is light green, the flowers are white and appear in profusion during July and August and are followed by an abundance of long, spiny seed pods. They vary in height from ten to thirty feet. The seeds may be sown in the fall. If sown in the spring they should be soaked for a day in warm water. They thrive in any soil. Scarifying the seed hastens germination. Cover to a depth of about one inch with fine soil.

No. 995. Echinocystis—White.
Pkt., 10c; ¼ Oz., 30c.

Gourds (Ornamental)



GOURDS

Gourd plants are exceptionally free from insect pests. Plant them six inches apart. Do not transplant, but sow the seed where the plants are to grow. They are novel annual climbers with ornamental foliage and singularly shaped fruits which are often strangely colored and marked. In Japan the tough fiber on the inside is used for the soles of sandals. In tropical countries, the shells are dried and used for dishes and drinking vessels. They grow 10 to 20 feet high.

Culture—Sow seed outdoors in well

pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about three times its size. Press soil down firmly and when plants are well established, thin out or transplant to prevent crowding.

No. 1132. Gourds—Ornamental, fruited.
Pkt., 10c; 1-Oz., 40c.

Ipomoea

(Moonflower Vine, Evening Glory)

Rapid-growing, half-hardy annuals quickly attaining a height of ten to fifteen feet, producing a dense mass of heart-shaped leaves and a profusion of beautiful large flowers which open at sunset and close in the morning.

The blossoms are in delicate, gorgeous colors and delightfully fragrant.

If seeds are notched or scarified and soaked in warm water for 24 hours before planting they will bloom six weeks from planting.

Culture—Sow seed outdoors in well pulverized, rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established, thin out or transplant to prevent crowding. If started indoors, young plants should be transplanted to the open ground after ground has become warm and the weather thoroughly settled.

No. 959. Ipomoea, (Evening Glory)—Rose lilac.

Pkt., 10c; ¼ Oz., 30c.

No. 1056. Ipomoea, (Moonflower)—White.

Pkt., 10c; ¼ Oz., 25c.

Kudzu Vine

(Pueraria Thumbergiana)

A twining vine of remarkably rapid growth, attaining a length of 40 to 50 feet in one season from established roots, hardy, though the vines die down every winter in the northwest. Foliage is large and lobed; purple Pea-shaped flowers in clusters, borne late in the season. A fine vine for arbors, verandas, etc., easily grown from seed.



KUDZU VINE

Culture—Sow when danger from frost is past in fine, rich soil $\frac{1}{4}$ inch deep and keep moist until seeds germinate. Transplant 6 to 12 feet apart and train against a trellis, assisting the young shoots in their growth.

No. 1181. Kudzu Vine, Japanese—Purple. Pkt., 10c; $\frac{1}{4}$ Oz., 30c.

Morning Glory



These well known hardy climbing annuals are rapid growers making from 4 to 20 feet of vine and are well covered with foliage and pretty flowers, making them useful for covering summer-houses, verandas or other structures where quick effects are desired. Soak the seeds several hours in luke-warm water and sow in a warm, sunny location in March or April. Allow plants to stand three or four inches apart. They are not readily transplanted and thrive best in full sunshine. They bear pretty flowers in a variety of colors and tints, fully expanded only in the morning.

Convolvulus Major is the old fashioned Morning Glory; flowers are mixed colors.

The Giant Japanese or Imperial produces larger blooms of a greater variety of colors than the convolvulus.

No. 600. Morning Glory, (Japanese Giant)—Mixed.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

No. 41. Morning Glory, (Convolvulus Major)—Mixed.

Pkt., 10c; $\frac{1}{2}$ Oz., 25c.

Nasturtium

(Climbing)

For easy culture, hardness and vast variety of beautiful brilliant colors the Nasturtiums will be found one of the most satisfactory annuals. For the trailing varieties, seeds should be sown in the Spring where plants are to remain, covering about 1 inch with fine soil, thinning to 6 inches apart when well up. Support the vines as soon as they begin to trail.

The tall varieties grow about five feet high and are splendid for covering fences, walls, steep banks, or other unsightly places. The flowers are a little larger than those of the dwarf varieties. They should be planted in spring after all danger from frost is past, in the position in which they are to remain, planting the seed about one inch deep, and the plants thinned to six inches apart. They can also be grown as pot

plants for winter flowering for screens, or as trailers for hanging baskets.

Price, any variety: Pkt., 10c; Oz., 25c.

(Tall or Climbing)

No. 1059. Nasturtium, Chameleon—Quite unique, each plant bearing flowers of a great variety of colors and markings.

No. 1061. Nasturtium, Vesuvius—Salmon-rose, dark foliage; an excellent variety.

No. 1062. Nasturtium, Tall Ivy Leaved—Mixed. The leaves resemble English Ivy. The flowers are of a distinct form and in a great variety of colors.

No. 1060. Nasturtium, King Theodore—Very deep crimson, nearly black; dark foliage.

No. 906. Nasturtium, Pearl—Cream white, or primrose.

(Lobb's Tall)

Price, any variety, Pkt., 10c; Oz., 25c.

Lobb's Nasturtiums are remarkable for the intensely brilliant colors of the flowers, which are slightly smaller than those of other climbing varieties.

No. 1064. Nasturtium, Black Prince—Velvety black flowers; dark foliage.

No. 1098. Nasturtium, Queen Alexandra—Variegated leaves; flowers blood red, marbled and mottled.

No. 1099. Nasturtium, Cardinal—Scarlet flowers; dark foliage.

No. 1100. Nasturtium, Emma Alida—Dark ivy-leaved foliage with golden-yellow, orange and deep scarlet lacinated flowers.

No. 1101. Nasturtium, Flamingo—A beautiful new variety with magnificent lacinated orange flowers.

Lilly's Tall Mixed—A splendid mixture of the best tall varieties, including all harmonizing colors.

No. 262. Lilly's Tall Nasturtiums—Mixed.

Pkt., 10c; Oz., 25c.

Scarlet Runner Bean

Popular for both ornamental and culinary purposes. This bean has attractive Pea-like flowers of a brilliant scarlet that are followed by an abundance of crops of edible beans. The plant is of easy culture. Plant the seeds at the base



of the trellis upon which they are to grow, the latter part of April or early May and thin the plants to stand 4 to 6 inches apart. They often grow 10 to 12 feet tall. A

light, warm, loamy soil, lightly fertilized and situated in a sunny location is most suitable. Cover the seed about 1½ inches deep with fine soil well pressed down. Cultivate frequently but lightly. Do not work among vines when they are wet, as it is liable to cause rust.

No. 2001. **Scarlet Runner Bean**—Scarlet.
Pkt., 10c; ½ Lb., 25c.

Sweet Peas



These most beautiful of the hardy climbing annuals, are very easy to grow, and thrive under ordinary garden conditions with very little care, but a little extra care will be amply repaid in larger and earlier blooms and brighter colors. The climate

of the Pacific Coast is ideal for their best development, and in no other locality will they produce blooms in such wonderful profusion and perfection.

On the Pacific Coast, where the ground does not freeze to any depth, the best time to plant is in November. They will apparently make very little growth during the winter, and it is better if the tops do not show above the ground until spring, but they will make a remarkable amount of root growth which will induce a strong growth of vines early in spring, producing better blooms and much earlier than if planted in spring. They may, however, be planted in February, March or April, and will do very well.

The location should be open, away from trees and shrubbery, where they will get plenty of sunlight and air. They will thrive on any good garden soil, but a rich clay loam will produce the brightest colors. The ground should be well drained, especially if planted in the fall. A heavy application of Morcrop Fertilizer should be spaded under and thoroughly mixed with the soil, to improve the mechanical condition and make it warm and porous and if the seed is planted in the fall the ground should have a mulch of straw or lawn clippings to protect it from the cold, keep it from packing, and to induce early growth in the spring. The seed should be planted about one inch apart in furrows; if planted in the fall the furrows should be five inches deep; if planted in the spring they should be from two to four inches deep; early plantings should be deeper than late plantings. Early in spring, if there is a hard crust on the ground, break it by raking over the rows. As soon as the plants are up cultivate frequently, and thoroughly. An occasional

top-dressing of Morcrop Fertilizer, will be beneficial.

As they grow six to eight feet high, they require a trellis of some sort, and six foot poultry netting makes a fine support and is easy to construct. They require considerable water, and it should be applied to the roots only; do not sprinkle the foliage. All of the blossoms should be picked each day; otherwise they will go to seed, and stop blooming. The more flowers you pick the more new ones will appear.

We offer 35 Splendid Varieties. All your favorite colors are listed so that you can have "your shades" in profusion.

Those varieties marked * have unusual merit. Only one of each color classification is so marked.

Price, any variety: Pkt., 10c; Oz., 40c.

Number	Name	Color Description
No. 1024.	*America,	red flake, white ground.
No. 1165.	*Austin Frederick Imp.,	giant lavender.
No. 1050.	Apple Blossom,	rose and pink.
No. 1005.	Asta Ohn,	lavender suffused mauve.
No. 1114.	*Blanche Ferry,	red and white.
No. 1166.	*Commander G o d s a l l,	violet blue.
No. 949.	*Countess Spencer,	rose pink.
No. 1008.	Dainty,	white, edged pink.
No. 1042.	Dobbie's Cream,	deep primrose.
No. 1072.	*Fiery Cross,	orange cerise.
No. 1014.	Florence Morse,	blush pink.
No. 1003.	*George Herbert,	rosy carmine.
No. 1118.	*Hawlmak Pink,	rich rosy pink.
No. 1045.	*Illuminator,	salmon orange.
No. 1009.	*King Edward,	crimson self.
No. 1041.	King White,	large waved white.
No. 1043.	Margaret Atlee,	giant buff pink.
No. 1048.	*Margaret Madison,	azure blue.
No. 1119.	Mascott's White,	solid white.
No. 1011.	Mrs. Routzahn,	apricot suffused, pink.
No. 1120.	*Mrs. Tom Jones,	bright delphinium blue.
No. 1047.	*Othello,	deep maroon, immense size.
No. 1121.	*Picture,	flesh pink suffused apricot.
No. 1002.	*Primrose Spencer,	best clear primrose.
No. 1113.	*Royal Purple,	the finest purple.
No. 1122.	*Royal Scot,	orange scarlet.
No. 1051.	Senator,	chocolate flake, white ground.
No. 1123.	*Tangerine Improved,	glowing orange.
No. 1124.	*The Cardinal,	intense poppy scarlet.
No. 1044.	*Thomas Stevenson,	orange scarlet.
No. 1125.	*Valentine,	blush pink, waved.

Sweet Peas—Continued

- No. 1046. Vermilion Brilliant, fine scarlet.
 No. 1049. Wedgwood, bright silver blue.
 No. 1001. White Spencer, large waved white.
 No. 1007. Mixed Spencer, all good colors mixed.

Thunbergia (Black Eyed Susan)



THUNBERGIA

A very beautiful, rapid growing annual climbing vine with attractive green foliage, growing about 4 feet long and used extensively for window boxes, hanging baskets, and for covering

low trellises and fences.

The plants prefer a sunny situation and bloom profusely throughout the entire season until frost. The blooms are pure white, orange, buff, etc., with large dark eyes, and of each color there is a variety with white eye and also with black eye—the latter is often called "Black-eyed Susan."

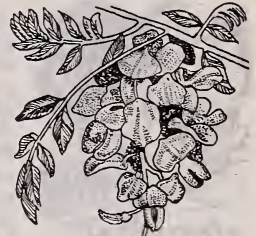
Culture—Sow seed outdoors in well pulverized rich soil after all danger from frost has passed, covering seed to a depth of about 3 times its size. Press soil down firmly and when plants are well established,

thin out or transplant to prevent crowding. If started indoors young plants should not be transplanted to the open until after the ground has become warm and the weather thoroughly settled.

No. 1153. Thunbergia—Large Flowering, mixed colors.

Pkt., 10c; ¼ Oz., 50c.

Wistaria (Chinese)



WISTARIA

The well-known hardy perennial vine of luxuriant and rapid growth, bearing, during the spring, immense panicles of fragrant blue flowers in great profusion, frequently blooming both in spring and fall. An extremely graceful climber. For trellis and arbor work no other vine can surpass it. Grows readily from seed but plants do not bloom until well established. Often attains a height of 25 feet. Foliage, light green.

Culture—Seed may be sown outdoors early in spring in a rich, mellow loam or plants may be started indoors or in a hot bed during winter. When plants are 1 foot high, transplant to permanent, sunny location.

No. 1183. Wistaria (Chinese)—Blue.

Pkt., 10c; ¼ Oz., 50c.

About Brands

We offer three "Brands" of Clovers (Red, Alsike and White) and Timothy, each representing a different grade of seed. They are "Lilly's Best," "Evergreen," and "Skookum."

Lilly's Best

generally known as L. B., is always better than 99% pure and of the highest germination. This is the brand you should buy because it represents the very best grade it is possible to produce. You get all clover seed and it grows. It costs a few cents more per pound but it takes less pounds to get a stand on an acre and proves to be the cheapest grade you can buy.

Evergreen Brand

equal to and exceeding in some cases the purity and germination of clovers offered by other houses. Not as good as L. B.

Skookum Brand

a lower grade than Evergreen, but good enough to pass the pure seed laws.

Good Seed Is Important

The seeds of many weeds commonly found in clover seed are very small and escape notice. A pound of clover dodder has 1,641,000 seeds; common plantain 1,814,360; lamb's quarter, 604,786 seeds; Russian thistle, 266,817 seeds; wild mustard, 215,995 seeds; wild oats, 25,493 seeds. Red Clover seed contains 313,900 seeds per pound. The Pure Seed Law requires only 92% purity. This allows more than a pound of weed to each acre. Russian thistle is very nearly the same size as Red Clover. Suppose this pound is Russian thistle, as is often the case with home-grown seeds. This means you sow 266,817 Russian thistle seeds per acre. An acre contains 43,560 square feet, so there would be six weeds to every square foot and a single thistle plant will ripen 100,000 to 200,000 seeds; tumbling mustard, 1,500,000.

Alfalfa and Clovers

Alfalfa

(*Medicago sativa*)

Alfalfa is a perennial legume belonging to the same family as peas, beans and clover.

Alfalfa succeeds best in a dry climate where water is available for irrigation. The best soils on the farm should be selected for the alfalfa field. It is practically useless to attempt to grow the crop on non-productive lands to improve them.

It is best to precede alfalfa for a year or two with some cultivated crop, such as corn or potatoes, to free the land from weeds. The ideal seed bed is a well-settled subsurface with a fine surface that is loose to a depth of two inches.

Alfalfa should be sown early enough to permit the plants to become well established before winter sets in. The rate of sowing depends upon the condition of the soil. In the West under irrigation 15 pounds is generally advised, while under dry-land conditions eight to twelve pounds is ample. Except under very favorable conditions alfalfa should be sown with a nurse crop.

Alfalfa should be cut for hay when the plants are well in bloom.

Varieties: The Common Alfalfa is best adapted to Northwest conditions except in a few districts where the winters are severe. In such sections Grimm is preferred to the Common. Hairy Peruvian and Cossack have both been tried in this section but failed to show any special merit. Never buy seed that is less than 99 per cent pure.

Lilly's Best Alfalfa—This is the only grade of common alfalfa that we offer. Because Alfalfa fields are left for a long time when once established, there seems to be no logical reason for using any other seed but the best.

Price, per pound, 26c, postage extra. Quantity price on application. See your dealer or write us.

Grimm Alfalfa—Of great value where the winters are severe and where common alfalfa freezes out. This variety has attracted considerable attention of recent years because of its peculiar branching root system and frost resistance. We handle only the best strain.

Price, per pound, 51c; postage extra. Quantity price on application. See your dealer or write us.

Turkestan Alfalfa, is very hardy and is adapted to very dry and unirrigated lands.

Price, per pound, 33c; postage extra. Quantity price on application. See your dealer or write us.

Alsike Clover

(*Trifolium Hybridum*)

Alsike Clover is most at home in northern latitudes or at high altitudes. It thrives best in a cool, moist climate. Mixed with red clover on uplands, alsike clover insures a stand on spots where red clover does not catch. Alsike clover is used mostly in mixtures with timothy or other grasses. In such mixtures it improves the hay and increases the yield. The grasses serve to support the clover and make it easier to cut and cure.

Alsike Clover will endure overflow that would kill most crops. It has been known to grow a year in water-soaked and water-covered soil and make a heavy growth. It is a good pasture plant, often remaining in a permanent pasture for many years. It is a good clover to seed in swales or on wet, natural meadows. It volunteers readily and will spread in such places.

Seeding should be at the rate of five to eight pounds per acre.

Lilly's Best Alsike per pound 35c, postage extra.

Evergreen Alsike, per pound 34c, postage extra.

Skookum Alsike per pound, 33c, postage extra.

Quantity price on application. See your dealer or write us.

Hubam Clover

An annual strain of the White Blossom variety. It is of large, erect, branching habit and grows very quickly, as much as 30 inches of new growth has been observed in 30 days. Valuable as a catch crop, as a pasture plant and as a hay crop. Beekeepers grow it for bee pasture as it yields nectar freely and blooms continuously over a long period of time.

Price per pound 51c, postage extra.

Quantity price on application. See your dealer or write us.

Red Clover

(*Trifolium medium*)

Generally speaking, Red Clover reaches its highest development in the western portion of Oregon and Washington, where under favorable conditions it may be cut three times during the year. The first crop should be cut for hay or ensilage early in June, the second for hay in August and the third for ensilage of green feeding late in the fall. Red-Clover is sometimes hard to establish on soils that have produced cereal crops exclusively for several years. This is possibly due to the method of seeding or the texture of the soil, but probably to the lack of nodule-forming

bacteria. Red Clover can be sown either in the spring or fall and generally does best with a grain crop that is not too thick, although it may be sown alone in the late summer or early autumn. This method is seldom used but is probably one of the most satisfactory ways of seeding west of the Cascade Mountains.

The soil should be well prepared and the seed must not be covered too deeply, although it must be in firm contact with the soil. Therefore light loams or loose soils should be packed or rolled so as to keep the moisture in them available to the young clover plants at all times.

Red Clover is well suited to be sown with timothy for hay crop and should be in all hay and pasture mixtures. It is often sown alone especially in sections where the conditions are favorable to seed production.

Sow 10 to 15 pounds of seed per acre and cover lightly.

Lilly's Best Red Clover per pound 41c, postage extra.

Evergreen Red Clover per pound 40c, postage extra.

Skookum Red Clover per pound 39c, postage extra.

Quantity price on application. See your dealer or write us.

Sweet Clover—White Blossom (*Melilotus alba*)

Sweet Clover may be utilized for feeding purposes, as pasturage, hay or ensilage. If seldom causes bloat.

Sweet Clover should never be permitted to show flower buds before it is cut for hay. It is very important that the first crop of the second season be cut so high that a new growth will develop. When the plants have made a growth of 36 to 40 inches it may be necessary to leave the stubble 10 to 12 inches high.

Sweet Clover has proved to be a profitable soil-improving crop. The large, deep roots add much humus to the soil and improve the aeration and drainage. As a rule, the yield of crops following Sweet Clover is increased materially.

Being a biennial, this crop lends itself

readily to short rotations. Seeding should be at the rate of 20 pounds per acre. We offer only scarified seed which insures good germination.

Price per pound 21c, postage extra.

Yellow Annual Sweet Clover (*Melilotus indica*)

This small yellow blossomed species is a low-growing, erect, early-flowering plant. It is an annual, while the white variety is a biennial. It makes a slower growth than the white variety, and is not considered so valuable.

Price, per pound, 21c; postage extra.

White Clover (*Trifolium repens*)

This is also called White Dutch Clover. It is a perennial plant, making growth of from four to ten inches. It is an excellent plant for lawns as it will grow under almost any conditions, is easy to start, and will make a nice lawn within six weeks from the time of planting. It will grow on almost any kind of soil and in the deep shade or the brightest sunshine. In sowing lawns it is always advisable to use grass seeds with the white clover as after two years the clover will become ragged if sown alone. White Clover is also excellent for pastures, especially in Western Oregon and the Puget Sound region. It produces a forage that is well liked by all stock, is sweet, very nutritious and makes lots of milk. For pastures it should be sown at the rate of six to eight pounds to the acre in addition to other grasses. It makes a good mixture with Italian Rye Grass, Orchard Grass and Redtop. In sowing large lawns or parks use from 25 to 100 pounds per acre. The more seed the better the turf and finer lawn you will have.

Lilly's Best White Clover per pound 61c, postage extra.

Evergreen White Clover per pound 56c, postage extra.

Skookum White Clover per pound 51c, postage extra.

Quantity price on application. See your dealer or write us.

Grasses

Orchard Grass

(*Dactylis Glomerata*)

Orchard grass, also known as Cocksfoot, is the earliest grass to start up in the spring, remains green during long, hot summers and late into the fall; it furnishes abundant feed, and it is fairly well liked by stock; but it grows in tussocks, and therefore, does not make an even sod. Perhaps the most serious fault orchard grass possesses is its tendency to become

woody soon after the blooming period is over. One of its most important advantages is that it ripens exactly with red clover, and is thus eminently adapted to sowing with that important leguminous plant. It is a week to ten days earlier than timothy and is generally conceded to possess longer life both in meadows and pastures. Its ability to grow in the shade of trees is likely responsible for its name. A possible objection to orchard grass for hay in the Puget Sound region is its early ma-

turity, being ready to cut before dry weather has set in. This, however, can be overcome by early spring pasturing.

Price, per pound, 28c; postage extra.

Quantity price on application. See your dealer or write us.

Red Top

(*Agrostis Vulgaris*)

On land that is too wet for timothy, red top or herds grass, as it is sometimes called, is decidedly the best substitute for that grass. It will even thrive on land too wet for cultivation. In the West there are many valleys in which there are extensive areas of low, level land, often too wet to plow on which red top is easily started. These meadows are the reliance of the rancher for winter feed and redtop is justly accorded a high place in the favor of the stockman. Red top is preferred for sowing with timothy, because it is not so early as orchard grass and makes a more even sod. Redtop is the most variable of all the cultivated grasses. It is the best for wet land and when sown on upland is strongly drought resistant and is often used for holding banks to prevent erosion. The best form has large, erect stems, with broad, coarse leaves. This is the one generally grown for hay and pasture and the seed we offer is of this type. It makes a good sod, and bears cropping and trampling well. On account of its small seed, Redtop should have a fine, mellow seedbed and care should be taken not to cover the seed too deeply.

Price, per pound, 46c. Fancy hulled seed 92% pure. Unhulled seed, per pound, 36c; postage extra. Quantity price on application. See your dealer or write us.

Crested Dogstail

(*Cynosurus Cristatus*)

It is adapted primarily to cool, moist regions like Western Washington and Oregon where it seems to thrive principally in the two extremes, hot sun and dense shade. Makes a fair lawn grass under those conditions and gives promise of becoming an important pasture grass for certain conditions. It is very nutritious and yields quite well.

Price, per pound, 44c; postage extra.

Quantity price on application. See your dealer or write us.

Sudan Grass

(*Andropogon Sorghum Sudanensis*)

Sudan grass is an early maturing annual sorghum plant. It is not particular about soil, but requires warm weather and must not be planted in the northwest until the weather is well settled. Under favorable conditions only 90 to 100 days are required to mature a hay crop. Thick seeding is

advisable, otherwise the crop grows too rank and coarse as the plants stool heavily and grow ten feet high if given sufficient room. More important as a fodder plant east of the mountains than on the coast.

Price, per pound, 16c; postage extra.

Quantity price on application. See your dealer or write us.

Velvet Grass

(*Holcus Lanatus*)

The hay is remarkable for its lightness, a ton of it being much more bulky than a like weight of other kinds of hay. The whole plant is covered by a growth of wool-like hairs. Also erroneously called Mesquite and Fog Grass. A good meadow grass in dry, sandy soil, of little value where other grasses thrive. It is a perennial about two feet tall and is soft and velvety.

Price, per pound, 22c; postage extra.

Quantity price on application. See your dealer or write us.

Timothy

(*Pheum Pratense*)

One of the most universally known and cultivated grasses, growing 25 to 40 inches tall and found on nearly all sorts of soil. It is especially adapted to cool, moist soils and because the seed is usually cheap, of high germination and purity it is a general favorite with farmers. Unlike many other grasses, a few days delay in the time of cutting makes but little difference in the quality of the hay—a very important point in a region or season where rains are frequent during the haying season. For cattle it should be cut just after it is through blooming, for horses ten to twelve days later. It does not stand grazing as well as other grasses and in some sections the best authorities advise against pasturing at all.

The importance of timothy in America is due to its rather remarkable combination of qualities, as well as its splendid adaption to the same area as red clover. Its advantages may thus be summarized:

1. It produces good yields.
2. A stand is usually secured easily.
3. The cost of seeding is less per acre than that of any other grass.
4. It seldom lodges.
5. It is easily cut and cured.
6. Its harvest period is longer than that of most grasses.
7. It is the favorite hay for horses and is in good demand.

Lilly's Best Timothy, per pound, 15c; postage extra.

Evergreen Timothy, per pound, 14c; postage extra.

Skookum Timothy, per pound, 13c; postage extra.

Quantity price on application. See your dealer or write us.

Tall Meadow Oat-Grass

(*Arrhenatherum Avenaceum*)

Tall meadow oat-grass matures exactly with orchard-grass and red clover and is, therefore, adapted to sowing with these crops. It is not very well liked by stock until they become accustomed to its peculiar flavor. It stands pasturing well, remains green late in fall, does not become sod bound, and thrives on drier soils than timothy, in fact it seems to be especially adapted to light, sandy or gravelly land. It does not like shade. Height from 30 to 60 inches.

Price, per pound, 31c; postage extra.

Quantity price on application. See your dealer or write us.

Brome Grass

(*Bromus Inermis*)

A hardy, smooth, erect, perennial usually two to three feet tall, producing strong creeping rootstocks. Primarily a dry land grass; it does best under dry farming conditions. Seeding is done during fall and spring at the rate of 15 to 20 pounds per acre. In the dry summers east of the Cascade Mountains it furnishes more green feed than any other of the true grasses. It is noted for its ability to withstand drought and still it does well on moist soils. It is used extensively as a pasture grass in those sections and is exceeded in the quality of its herbage only by Kentucky blue-grass.

Price, per pound, 24c; postage extra.

Quantity price on application. See your dealer or write us.

Rye Grasses

Italian Rye-Grass

(*Lolium Italicum*)

Italian rye grass is practically an annual, but by allowing it to ripen seed before cutting the hay, which is perfectly safe to do as far as quality is concerned, it re-seeds itself and is thus to all purposes a perennial. In pasture plots not too closely cropped this reseeding goes on naturally and for that reason Italian rye-grass is becoming quite popular on the Pacific Coast. It comes quickly from seed and grows rapidly afterwards. In Europe it is claimed that Italian rye-grass is cut as often as four or five times in a season which is evidence that it recuperates quickly after being cut. It should be sown in the fall on the Pacific Coast.

Price, per pound, 17c; postage extra.

Quantity price on application. See your dealer or write us.

English or Perennial Rye-Grass

(*Lolium Perenne*)

History tells us that this grass was the first of the true grasses to be grown under domestication for hay and pasture purposes. It is a tufted short-lived perennial which grows $1\frac{1}{2}$ to 2 feet tall and its principal use in this section has been as an ingredient in pasture mixtures. It comes quickly after seeding and is highly relished

by stock, being preferred to most other cultivated grasses. The rye-grasses reach a higher state of perfection on the Pacific Coast than in any other section of America. Only the fact that it is short lived keeps it from becoming extremely popular, even this fact can be frequently over-looked when one considers the quickness of its growth.

Price, per pound, 19c; postage extra.

Quantity price on application. See your dealer or write us.

Pacey's Rye Grass

Closely related to English or Perennial Rye Grass. Valuable in lawn and where quick results are desired. It is a short seeded type and evidently is a selection of the English species.

Price, per pound, 23c; postage extra.

Quantity price on application. See your dealer or write us.

Domestic Rye Grass

A native species of Rye Grass in many ways just as desirable as the imported varieties. Usually not so high in price. Produced mostly in Western Oregon where it has all the habits of a true perennial.

Price, per pound, 16c; postage extra.

Quantity price on application. See your dealer or write us.

Fescues

Hard Fescue

(*Festuca Durinacula*)

Differs from sheep's fescue in having harsher, firmer and thicker blades and forms smaller tufts. Thrives in the shade and of late is being used for the "rough"

on golf courses. Deep green in color, it grows close to the ground and stands clipping and pasturing well. Reaches a height of 20 to 25 inches.

Price, per pound, 32c; postage extra.

Quantity price on application. See your dealer or write us.

Chewings or Creeping Fescue (*Festuca Rubra*)

A creeping rooted species forming a close and lasting turf, resisting drought and thriving on inferior soils. The leaves are fine, closely matted, not bunched, making it desirable on lawns and the "greens" of golf courses, for which it is used extensively. It is one of the earliest of grasses, valuable in shady places as well as on poor and sandy soils. Grows 25 to 30 inches tall, but the top growth is thin. Valuable in pastures where its turf fills in the bare spots between the bunch grasses.

Price, per pound, 46c; postage extra.
Quantity price on application. See your dealer or write us.

Meadow Fescue (*Festuca Pratensis*)

In Oregon, Washington and Idaho meadow fescue is regarded with considerable favor. On the basaltic wheat producing soils of eastern Washington and Oregon when a good stand of it is secured, it is undoubtedly one of the best grasses, both for hay and pasture. If the difficulty in securing a good catch could be mastered it would likely become the standard for that section. After the frost has killed the native grasses, stock may be pastured on Meadow Fescue, thus reducing by several weeks the period of dry-lot feeding. Meadow Fescue is sometimes called English Blue

Grass, which is incorrect and confusing as it is not related to the blue grasses.

Price, per pound, 30c; postage extra.
Quantity price on application. See your dealer or write us.

Tall Meadow Fescue

A special strain of Meadow Fescue that has been selected with a view of perfecting a heavy producing hay plant in the sections where Meadow Fescue thrives. It grows taller and more dense than the regular variety and therefore, produces heavier crops of hay.

Price, per pound, 31c; postage extra.
Quantity price on application. See your dealer or write us.

Sheep's Fescue (*Festuca Ovina*)

Sheep's Fescue is a bunch grass, forming dense tufts three to six inches in diameter, with numerous stiff, rather sharp, nearly erect, bluish gray leaves, two to four inches long. The plant grows 20 to 25 inches high. While the grass is decidedly tough and has a tendency to get woody it is nutritious and eagerly eaten by sheep and to a less degree by cattle. It does fairly well on light, sandy soils where the other more valuable pasture grasses fail.

Price, per pound, 32c; postage extra.
Quantity price on application. See your dealer or write us.

Bent Grasses

Puget Sound Creeping Bent

The true botanical name of this valuable grass is *Agrostis Maritima* and its natural habitat is the lowlands adjacent to the Puget Sound and North Pacific coast. It is a close relative to True Creeping Bent, *Agrostis Stolonifera*, which it resembles in many ways. Though it naturally prefers a moist soil it is found likewise on dry upland or sandy soils and stands drought very well indeed. Authorities assume that its natural preference for lowland is due to its liking for lime-free or acid soils and not for excessive moisture, since it thrives noticeably during the dry fall months. On the other hand it will stand uninjured on land covered with water for several months. It is well suited for grazing purposes, to say nothing of its special qualities as a lawn and golf greens grass where it excels all other grasses. Once established it spreads rapidly by underground stems or stolons and forms a dense and permanent turf which improves with age. The plants are practically 100 per cent creeping and frequently vegetable propagation is practiced by taking up these creeping root stalks cutting them in 2-inch pieces and using them instead of seed for starting new lawns or greens.

Price, per pound, \$2.25; postage extra.
Quantity price on application. See your dealer or write us.

South German Mixed Bent

A mixture of bent grasses that has been imported from southern Europe for years for making lawns and seeding golf courses. The predominating grasses in the mixture are Redtop, (*Agrostis vulgaris*), Rhode Island Bent (*Agrostis stolonifera*), and Velvet Bent (*Agrostis canina*).

It is not nearly as desirable as Puget Sound Creeping Bent because usually only about 15% of the mixture is creeping (stoloniferous rooted) while the Puget Sound Bent is practically 100% creeping.

Price, per pound, \$1.50; postage extra.
Quantity price on application. See your dealer or write us.

Rhode Island Bent

The natural Rhode Island Bent makes up much of the pastures of New England and north Atlantic states, and it is not infrequently cut for hay. Rhode Island Bent is distinguished from red-top by its smaller size, narrow leaves, short ligule, and its peculiar open panicle, which does not close upon maturity. It grows 6 to 24 inches in height. It is a beautiful grass and makes

up a large proportion of the highly esteemed South German mixed bent seed. Seed from New Zealand of the same grass is called Colonial Bent. Unlike some other grasses it thrives well on acid soils, and its

turf is injured rather than improved by the use of lime.

Price, per pound, \$1.50; postage extra.

Quantity price on application. See your dealer or write us.

Blue Grasses

Kentucky Blue Grass

(*Poa Pratensis*)

Its palatability to all classes of stock, the evenness of the sod it forms, the beautiful color of its verdure, and its increasing productiveness with age, if properly handled, all conspire to make bluegrass the king of pasture grasses. Were it not for its habit of remaining dormant during the dry, warm months of summer, the length of time required to secure a good stand of it, and its comparative low yield of forage, bluegrass would indeed leave nothing to be desired as a pasture grass on soils to which it is adapted. These objections to bluegrass are all real and the very general dependence on bluegrass for pastures in the past lead many American farmers to the conclusion that they could not afford to keep their good lands in pasture. One of America's best authorities on the subject says it takes three years under the best conditions to establish a stand of blue grass and that ten to twenty years are required to get a first class bluegrass pasture such as Kentucky stockmen boast about. In the

Northwest it is a desirable ingredient in pasture mixtures, producing much succulent feed both spring and fall.

Price, per pound, 49c; postage extra.

Quantity price on application. See your dealer or write us.

Canada Blue Grass

(*Poa Compressa*)

Canada Blue Grass is a hardy perennial grass of value for pasture purposes on the sandy soil, in the northern tier of States and Canada, producing an abundance of creeping root stocks by which it forms a close turf. It rarely attains a height of more than 24 inches, usually growing from six to eight inches high. It is dark blue in color and resembles Kentucky Blue Grass, to which it is related.

Its value is almost entirely as a pasture grass, since it does not grow to a sufficient height to give a profitable yield of hay. The hay which it does produce, however, is of excellent quality.

Price, per pound, 44c; postage extra.

Quantity price on application. See your dealer or write us.

Mixed Lawn Grasses

Evergreen Mixture

Only the fine leaved and long lived grasses are used in this mixture, which will produce a beautiful, velvety, carpet-like lawn that will last for years. Just enough white clover is used to make a quick showing and act as a nurse crop for the grasses while they are becoming established.

1-lb. Cartons, 75c; 5-lb. Cartons, \$3.25;

Bulk, 65c per lb.

Imported Mixture

An extra fancy mixture of fine leaved grasses only. Contains no clover and should be sown thickly, as the finer leaved grasses

start slowly. We recommend this mixture to those desiring the finest lawn in their neighborhood.

1-lb. Cartons, 75c; 4-lb. Cartons, \$2.60;

Bulk, 65c per lb.

Nonpareil Mixture

A mixture of suitable, hardy grasses selected to produce a quick lawn that will stand lots of abuse and stay green the year round. Some of the grasses will eventually become coarse and bunchy, but for a serviceable mixture it is ideal.

1-lb. Cartons, 50c; 5-lb. Cartons, \$2.25;

Bulk, 45c per lb.

Pasture and Hay Mixtures

These Pasture Mixtures contain the correct early, medium and late grasses to supply pasture continuously during a long season; also bunch, deep rooting, and creeping grasses to form a tough and lasting turf. The Hay Mixture is composed of tall-growing grasses which will mature about the same time, and will produce the maximum amount of hay of the best quality.

Per lb., 25c; 50-lbs., \$11.00; 100-lbs., \$21.00

No. 1 Pasture Mixture

Especially prepared for wet bottom lands.

No. 2 Pasture Mixture

For dry up-lands, and especially useful for sowing on logged off land.

Hay Mixture

A splendid mixture, producing hay of fine quality and maturing evenly.

Grains and Forage Crops

Barley

Barley likes well tilled soil and for that reason should follow a cultivated crop. The soil should be plowed in the late fall or early spring six to eight inches deep and a good seed bed prepared by harrowing or discing till the surface is loose, but the sub-surface down two or three inches is reasonably firm. Spring barley should be seeded as early as the ground is fit to work. This varies from the middle of February for the drier uplands to May 1st in the wetter lowlands. One bushel (48 lbs.) per acre is sufficient to sow in the drier sections of the Northwest, but as much as two bushels (96 lbs.) should be seeded in the fertile lowlands of the coast. Cut for hay while the kernels are in the dough stage and for grain when the joints of the straw turn brown before fully ripened.

Lilly's "Success" Beardless Barley, an exceptional strain of true beardless, spring barley that was perfected by the Washington State College. Very heavy producer. Good for hay or grain.

Price, per pound, 5c; postage extra.

Lilly's White Hulless Barley (Beardless). It threshes out like wheat and grows beardless. More productive and two weeks earlier than wheat, making it a splendid spring sown crop in some sections.

Price, per pound, 5c; postage extra.

Lilly's Common Bearded Barley, a white six-rowed variety of bearded barley that is still very popular. It is sufficiently hardy that it can be sown in the fall in sheltered localities west of the Cascades.

Price, per pound, 5c; postage extra.

Quantity prices on application. See your dealer or write us.

Oats

Oats may be broadcasted with better results than wheat or barley. Some farmers sow them on stubble land and then disc them in, but this is not considered advisable, for oats will respond to thorough seed bed preparation by increased yields which will well pay for the extra labor. Oats cannot be grown in arid sections where wheat and rye will still produce a crop. It has a vigorous, spreading root system, and will do better on sod or newly cleared land than either wheat or barley. It is best to fall plow, then disk in spring and seed with a drill.

Forty to sixty pounds of seed per acre will produce more grain on the drier uplands than heavier seeding, but 80 to 100 pounds may be used with profit on the bottom lands.

Lilly's Gray Winter Oats—Especially valuable for fall seeding, grows tall, has

stiff straw and yields heavily. Good for seeding with Gray Vetch.

Price, per pound, 5c; postage extra.

Lilly's Abundance Oats—Introduced from Scotland and a proven yielder on heavy soils. Medium height, erect white seeded and medium early. A spring grain.

Price, per pound, 5c; postage extra.

Lilly's Victory Oats—Excels all other for yield on light soils. The quality also is fine. Habit is erect and seed white. Sow in the spring.

Price, per pound, 5c; postage extra.

Lilly's Swedish Select Oats—A heavy strawed, very productive variety adapted to general conditions on the coast. This white spring oats is very popular in all the oat growing sections.

Price, per pound, 5c; postage extra.

Lilly's Banner Oats—A white seeded, spreading headed spring oats that is too well known to require much description. A very heavy yielder.

Price, per pound, 5c; postage extra.

Lilly's Black Alaska Oats—A black seeded spring oats with heavy straw and much foliage. Good to sow with vetch or peas and fine for hay or green feed.

Price, per pound, 5c; postage extra.

Lilly's Skookum Oats—A selected white oats intended for use as hay, as no particular attention is given to keeping the strain pure.

Price, per pound, 5c; postage extra.

Quantity prices on application. See your dealer or write us.

Rye

Rye has been aptly called the "Grain of Poverty" because it is better adapted to poor soils than other grains. This fact should not prevent its culture on fertile soils where it will produce enormous crops of forage, pasture or grain. It is very hardy, and where sown early in the fall makes good late fall, winter and spring pasture. It should not be pastured until after it starts to joint and if intended for pasture should be sown quite thick. The rate of seeding varies, 80 to 200 pounds, depending on the nature of the soil and the purpose of the crop.

Where the rye is to be used primarily for pasture on the better soils one or two pounds of Dwarf Essex Rape to the acre will add to the value of the pasture, but on ordinary upland soils, it will not be of much value. Rye should be seeded a little heavier for pasture than for other purposes.

Rye is not yet raised to any extent in Western Washington for grain, but some sections are beginning to grow it for that purpose. Where more rye is grown than

is needed for other purposes it may very well be left for seed.

Lilly's Rosen Rye—Introduced by the Michigan State College from Russia; this variety has taken the rye growing sections by storm, heavy yielding, large seeded, high quality rye. The best winter variety by far.

Price, per pound, 5c; postage extra.

Lilly's Common Rye—A selected strain of the common fall rye that has been grown in this country for years.

Price, per pound, 5c; postage extra.

Lilly's Spring Rye—This strain was perfected for us by the Washington State College and is grown for us under their supervision. A good yielder and a valuable addition to our list of grains.

Price, per pound, 5c; postage extra.

Quantity prices on application. See your dealer or write us.

Speltz or Emmer

Apparently a species of wheat which retains its hull when threshed and resembles beardless barley when growing. It is very hardy, though not grown much commercially. Does quite well on poor soils and likes warm, sheltered locations. Culture same as for wheat.

Price, per pound, 5c; postage extra.

Wheat

Wheat is the standard grain crop of the Northwest. It is grown under wide variations of temperature, elevation and rainfall. Fall wheat should be drilled in at the rate of from 45 to 90 pounds per acre on a rather loose, cloddy seed bed. Spring wheat does better when drilled in early on a seed bed that is rather firm below the first two or three inches. Harrowing wheat is of doubtful value unless the ground is badly crusted or foul with mustard or other weeds. As a rule, winter wheat yields more than spring wheat. For silage or hay, wheat should be cut in the dough stage, but for grain it should be well matured.

Lilly's Pedigreed Sun Wheat—A remarkable variety of winter wheat. It is red seeded, smut and rust resistant and a heavy yielder. It is beardless.

Price, per pound, 5c; postage extra.

Lilly's Red Russian Wheat—A late maturing variety of winter wheat, producing heavy yields and dense foliage. Matures late.

Price, per pound, 5c; postage extra.

Lilly's Marquis Wheat—Extremely early and productive as well as hardy. Straw is stiff, seed is red, heads long and free from beards. A spring wheat.

Price, per pound, 5c; postage extra.

Lilly's Bluestem Wheat—The popular Pacific Coast strain of a valuable white seeded wheat. Mostly used as a spring

wheat but will stand fall seeding in sheltered sections.

Price, per pound, 5c; postage extra.

Quantity prices on application. See your dealer or write us.

Broom Corn

Broom Corn will mature a crop in a colder climate and on less rainfall than any of the other sorghums. The soil should be worked in early spring to conserve moisture, then again, just before planting to destroy weeds. It is usually planted about ten to fifteen days later than corn. It should be planted rather thin to get a uniform, salable product. One and one-half pounds of viable seed should be sufficient to plant an acre. The cultivation should be much the same as for corn; shallow, flat, frequent cultivation is best, as the large feeding roots lie near the surface.

Price, per pound, 20c; postage extra.

Buckwheat

Buckwheat may be grown on rough, poorly prepared land, but will respond to better treatment with an increase in production. The land should be plowed early to allow time for the vegetation or manure which is plowed under to decay. Occasional harrowing before planting is advisable to conserve moisture. Seeding should be delayed until the soil is warm, as buckwheat is very sensitive to frost. June is the month to seed. Shallow seeding with a drill, 50 lbs. per acre, gives the best results. The variety known as Japanese Buckwheat is hardier than other varieties for the Northwest. The crop is usually harvested with a binder shortly after the first blooms have matured seed. It is well to cut in early morning or on cloudy days to prevent shattering. This crop, in the Northwest, is used principally for bee pasture, but in the real Buckwheat sections it is grown for grain which is ground into flour and makes excellent hot cakes.

Price, per pound, 7c; postage extra.

Corn

Corn requires more time to mature than wheat, oats, or barley. The greatest danger is from cold weather and frosts. The corn plant develops a great number of small fibrous roots just below the surface of the ground which spread in all directions for several feet. Because of this habit corn should be laid by when it is too feet high and the last cultivation should be rather shallow, not to exceed three or four inches.

The field for corn should be plowed in late fall, about eight inches deep, and left rough. If it is not possible to fall plow, early spring plowing should be somewhat shallower and should be harrowed at once. Just before planting, a seed bed should be prepared with disk and harrow to a depth

of about three inches. It is important to do this just before planting to give the corn an even start with the weeds.

Corn should be planted until the ground begins to get warm. The average date to plant is May 10th. This may vary from April 15th to June 1st in different sections of the Northwest. For silage some prefer to drill the seed in rows $3\frac{1}{2}$ feet apart with plants 8 to 15 inches apart in the row. Better cultivation can be given if the corn is planted in hills $3\frac{1}{2}$ feet apart each way. For seed production there should not be over two or three stalks in a hill.

The corn field may be harrowed once or twice before the corn is large enough to cultivate. This will keep the soil loose and kill small weeds as they are coming up, and will reduce the number of cultivations required.

Corn is raised in the Northwest primarily for silage, but it may be shocked and fed as fodder or cribbed and fed as grain in the sections of longer seasonal growth.

Minnesota No. 13—Is considered the best yellow dent variety for the Northwest. It is early maturing, heavy yielding and is admirably adapted to our conditions.

Minnesota No. 23—One of the earliest varieties of yellow dent, sometimes called white cap dent.

Northwestern Dent—A flint-like white dent that is a sure cropper, matures early, grows large.

Red Cob Ensilage—A special variety grown for fodder and ensilage and not for grain.

Pride of the North—Early maturing, heavy yielding, long kernalled yellow variety, recommended for the Northwest.

Champion White Pearl—A large, late white dent corn, suitable to favored sections.

Price, any variety, per pound, 15c; postage extra.

Quantity prices on application. See your dealer or write us.

Field Peas

A valuable grain, hay, silage and green manure crop for the Northwest. The "corn" of the north Pacific coast. They should be sown very early in the spring as they like cool growing weather. Well drained loam soil is best.

Field peas (*Pisum arvense*) are well adapted to the conditions of Western Oregon and Western Washington. They do well on a large variety of soils, but are especially adapted to clay soils and alluvial bottoms. They are grown for grain, hay, ensilage and soiling. Peas are nutritious, and the hay and ensilage are eaten with relish by most kinds of stock. When grown for hay about 2 bushels of peas and 2 bushels of oats per acre are sown together as early in the spring as the condition of

the ground will permit. When sown at the same time the oats often choke out the peas. This may be largely avoided by sowing the peas first, preferably with a drill since the seed is difficult to cover and when they have sprouts on them about 2 inches long, drill in the oats. This will give the peas the start and they will hold their own much better. If sown broadcast they should be well covered with a disk harrow. Peas should be cut for hay when the seeds in the first pods are just ready for table use. Sown in the early spring they mature for hay from the 1st to the 15th of July. The yield is from $1\frac{1}{2}$ to 4 tons per acre. When harvested for seed the yield is usually from 25 to 30 bushels per acre. Peas are often sown alone and harvested when mature by swine turned into the field.

Lilly's Yellow Canadian—The most generally grown variety of peas, both for stock feed and human consumption. Seed is small, smooth and round and the yield large.

Price, per pound, 10c; postage extra.

Lilly's Green Field Peas—A selected strain of blue or green peas, sometimes called Bluebell. Seed is larger than the Yellow Canadian, but similar in all other respects except color.

Price, per pound, 10c; postage extra.

Lilly's Marrowfat Peas—A special strain of medium sized Marrowfats adapted to the Northwest. They are larger than the varieties listed above and are whitish-yellow in color. A splendid variety for table use, they are very rich and nutritious.

Price, per pound, 15c; postage extra.

Whip-Poor-Will Cow Peas—Grown in a limited way in the warmer sections of eastern Oregon and Washington as forage and cover crops. Require warm weather, not adapted to the coast.

Price, per pound, 20c; postage extra.

Quantity prices on application. See your dealer or write us.

Kale, Thousand Headed

A deep, well drained rich loam soil is best for this crop, hence the ordinary valley silt loam soil, if well drained, thoroughly tilled, and heavily manured, will produce excellent yields. A long, narrow, slightly sloping field running alongside a piece of sod ground, or a wide sodded fence row, or one of the farm lanes is preferable, as the hauling then may be done on the firmer ground during the wet winter weather. The kale should not be planted on the sod ground itself, however, as this often leads either to injury from cut-worms or from drying out of the soil where the sod is not thoroughly broken down.

The kale ground should be heavily manured and deeply plowed in the fall if possible, and replowed once in the early spring, and again before transplanting. If

fall plowing cannot be done, manuring during winter and spring and deep early spring plowing and discing, repeated twice before transplanting, will put the ground in good shape. Following the second plowing and discing the ground should be kept clean of weeds and thoroughly mulched to conserve moisture by frequent light harrowing until transplanting time.

For transplanting, the seed should be sown in drill rows about three feet apart, as early in March as it is possible to get on the ground. If possible a strip of the best drained ground on the farm should be used for growing the young plants, and this should be manured and plowed in the fall so that it need only be replowed and worked down at once for seeding in the early spring, thus getting the plants started as early as possible. On sandy loams the seeding need not be done so early, unless very early fall feed is desired. One pound of seed will furnish more than enough plants for an acre.

Price, per pound, 60c; postage extra.

Millet

Millet is used as a catch crop where some other crop has failed, as it is one of the quickest crops to mature. It requires hot weather to germinate, and produces a good crop when planted as late as June or July. It should be planted shallow, about one inch deep, on a rather firm seed bed.

Millet makes very rich hay if cut just as the last heads are out of the boot. For seed it should be cut rather green (the leaves and stems are still green after the seed is mature) and allowed to cure in the bundles, which should be shocked in bundles two and two.

Golden or German Millet—Medium early, yellow seeded, fine for hay or forage, also a heavy seed producer.

Japanese Millet—Often grows six feet tall and yields enormous tonnage of hay and forage, sometimes called billion dollar grass.

Siberian Millet—Best for localities having hot weather, resists heat and drought well, produces abundantly.

Hungarian Millet—Earlier than Golden Millet and less productive of seed, but a splendid forage crop. Has slender stems and much foliage.

Yellow Hog Millet—The best strain of broom corn millet; yields seed in great abundance. Forage is rather coarse.

Price, per pound, any variety, 15c; postage extra.

Quantity prices on application.

Marrow Cabbage

Marrow Cabbage is a hybrid secured by crossing kohl-rabi, thousand headed kale and the Jersey chou. It resembles kale very closely when young, but as it grows

older the stalk enlarges, reaching a diameter of from three to six inches at the largest part. The stalk varies in height from two to four feet, depending upon the richness of the soil, and often weighs ten or more pounds. It has a solid pith, or marrow, and it is from this that it takes its name. A peculiar habit of the marrow cabbage is that the lower leaves enlarge and then turn yellow and fall off. Then the next lower leaves enlarge and in due time turn yellow and fall, and so on until the stalk becomes bare for two-thirds or more of its length. These leaves may be pulled off and fed just before they begin to turn yellow. It is this habit that makes the marrow cabbage an especially suitable soiling plant for poultry during the summer and fall months.

Price, per pound, \$2.50; postage extra.

Soy Beans

Only the earliest varieties of soy beans are grown successfully in the Northwest, as they are very sensible to frost and require a relatively hot season to mature, much like the sorghums. Soy Beans do best when planted in rows and cultivated. Much the same method of culture is used for Soy Beans that is used for raising garden beans. The stems are woody and of questionable value for roughage, but the seeds are rich in oil and are considered a very concentrated food. Soy bean oil is extracted from the seeds and is used as a substitute for linseed oil in the preparation of paints. Soy bean meal is the basis of many choice dishes served by the Chinese and Japanese; however, in this country it is used as one of the sources of protein in poultry and dairy feeds.

Price, per pound, 20c; postage extra.

Rape, Dwarf Essex

Rape (*Brassica napus*) has been grown in the coast region with excellent results for twenty years. It is a succulent, nutritious forage plant, admirably adapted to the moist mild climate of the Pacific Coast. It stands considerable freezing and is seldom winter-killed west of the Cascade Mountains. It does best on peaty soils, but is not adapted to very light, sandy or heavy clay soils. It is a heavy feeder, and must not be expected to succeed on poor, worn-out land.

Rape is an excellent crop for pasture or soiling, i.e., for cutting and feeding green for hogs, sheep, goats and poultry. Fed to dairy cows it causes a large flow of milk, but to avoid tainting the milk it should be fed immediately after milking, at the rate of 30 to 50 pounds per day, in two feeds. On account of danger of bloating, sheep, goats and cattle should never be turned on rape for the first time when they are hungry, or when the rape is wet with dew

or rain. They should have plenty of something else to eat first, and plenty of salt at all times. It is a good plan to give them access to hay or a grass pasture to prevent overloading on rape. When sheep have become accustomed to it they may be left on it continually with but little danger.

Price, per pound, 15c; postage extra.

Sunflower

Sunflowers have attracted a good deal of attention the last few years as a Silage Crop. Planted and cultivated like corn, enormous yields are produced. (Yields as high as 30 tons have been reported per acre.) In the higher altitudes and under dry farming conditions the average yields per acre are greater than that of any other crop. Do not plant too early in the spring, and cultivate frequently. Plant 10 pounds per acre.

Price, per pound, 15c; postage extra.

Flax

Flax is easily injured by frost, but is adapted to the cool northern part of the temperate zone.

The land for flax should be plowed as long before seeding as possible to allow the seed bed to settle together. Just before seeding the ground should be harrowed so that a shallow mulch about an inch deep is obtained. The seed should be drilled one to two inches deep at the rate of 30 to 70 lbs. per acre for seed, or 50 to 110 lbs. for fiber. It should be planted about the same time as corn or slightly later.

Price, per pound, 15c; postage extra.

Vetch

The stems of vetch are not strong, and heavy crops are inclined to flatten out on the ground. When in this fallen condition it soon begins to mold and is very difficult to harvest. To furnish support for it and keep it up off the ground a bushel of oats, wheat, or rye, and a bushel of vetch per acre are usually sown together. It is a common practice with vetch growers to sow winter oats and vetch broadcast in the early fall on land that has raised a spring crop to cover the seed with a disk harrow. If the land is loose and easily worked, this method gives good results, but like most other crops vetch gives much better yields if sown on a well prepared seed bed. If the ground is packed, or if the seeding is done in the spring, the land is usually plowed and a good seed bed prepared.

Sown with rye the last of August or early in September, Gray, Hungarian and Purple Vetch should be ready for soiling, i.e., feeding green, from April 15 to May 1; sown with winter oats or wheat October 1st, it should be ready about May 1; sown with winter oats or wheat in the late fall it should be ready about June 1; sown with oats in February, it should be ready about June 15th. It is sown also in the early spring, but fall seeding usually gives the largest yields.

When cut in the early spring for soiling a second crop may be cut or pastured, or the land may be plowed and planted to some other crop.

When seeds are just appearing in the first pods is usually considered the best time to cut vetch for hay. Some cut it earlier than this, while others allow the first seeds to become pretty well mature. If the crop is not too heavy it may be handled in the ordinary way, but it should be put into shocks before the leaves are dry enough to be broken off during the handling.

Gray Vetch—Is also known as Oregon or Common Vetch. Adapted to either fall or spring planting and well adapted to all sections of the Northwest, especially the Pacific Slope. More Gray Vetch is grown than all other varieties put together.

Price, per pound, 10c; postage extra.

Hungarian Vetch—A new variety developed at O. A. C., that is aphid resistant and adaptable to culture on low, wet and sour soils as well as heavy muck lands.

Price, per pound, 10c; postage extra.

Purple Vetch—This variety is not so well adapted to forage production, but seeds heavy on uplands and the seed always commands a good price for cover crops in the citrus section of the south. It is, therefore, grown mostly for seed.

Price, per pound, 10c; postage extra.

Hairy Vetch—Also called Winter Vetch, is a biennial and is sown in the fall like any winter grain. Because the seed is much smaller than gray vetch, less pounds of seed are required per acre, thirty to forty pounds per acre with grain is sufficient to insure a good crop. Hairy Vetch is used extensively for cover crops in the orchard districts of Oregon and Washington.

Price, per pound, 20c; postage extra.

Quantity prices on application. See your dealer or write us.

LILLY'S PACKET SEEDS

You are safe in buying Packet Seeds from the Lilly Seed Display Case in your Dealer's Store. Rest assured that the varieties are adapted to culture in the Northwest and that the seeds are of high germination and purity. It has taken us almost 40 years to establish our present enviable business reputation and we stake it all on the quality of Lilly's Seeds.

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are sold by a great many Dealers throughout the Northwest. You will appreciate the prompt service you can get in being able to buy a product of recognized merit from your local dealer with whom you enjoy a personal acquaintance. For your own protection, for your dealer's protection, and for our protection, we ask that you insist on getting the Stock Number of every lot of bulk seeds you buy. The Stock Number identifies the seed and by its means we can trace the origin, age, purity, germination, etc., in running down any complaints that may arise.

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