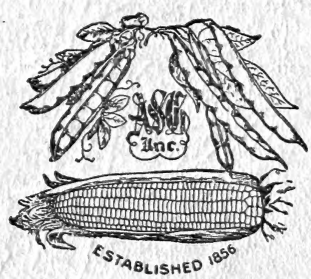
DESCRIPTIVE CATALOGUE

OF

VEGETABLES

FOR

QUICK FREEZING



Associated Seed Growers

Incorporated

New Haven, Connecticut

Number Six

Associated Seed Growers, Inc.

Breeders and Growers

New Haven, Conn., U. S. A.

Consolidating

THE EVERETT B. CLARK SEED CO., Est. 1857
N. B. KEENEY & SON, INC., Est. 1860
JOHN H. ALLAN SEED CO., Est. 1856

Cable Address: Asgrow

Growing Stations and Principal Warehouses at

Milford, Connecticut
Sheboygan, Wisconsin
St. Paul, Minnesota
St. Anthony, Idaho
Ashton, Idaho
Filer, Idaho
Powell, Wyoming
Bozeman, Montana
Fairfield, Washington
Salinas, California
Gervais, Oregon
LeRoy, New York
Green Bay, Wisconsin
Greeley, Colorado
Rigby, Idaho
Rexburg, Idaho
Teton, Idaho
Bonners Ferry, Idaho
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Mt. Vernon, Washington
Sacramento, California
Brooks, Alberta

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Departments of Breeding at

Hamilton, Montana
Milford, Connecticut
Milpitas, California
Greeley, Colorado
Indianapolis, Indiana
Powell, Wyoming
Filer, Idaho
Bonners Ferry, Idaho
Baton Rouge, Louisiana
Green Bay, Wisconsin

Sales Branches and Distributing Warehouses at

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ASSOCIATED SEEDS, INC.
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European Representative: J. J. Lion, London

Foreword

THE quick freezing industry is still in its early days and the following list must necessarily be brief since we have preferred to base it on experience rather than theory, analogy or guess work. In addition, however, to the published reports of various tests and trials, we have been privileged to receive reports from a number of packers and laboratories in different areas on the suitability for freezing of many varieties. From such sources and data our list has been compiled.

This is not to say that we have omitted consideration of the physiological and other characteristics of leading varieties with special regard to their resistance to change of texture, color and flavor under the processes involved in preservation by freezing and subsequent cooking.

On the contrary the subject of suitability for freezing has had a place for some years in the Asgrow Breeding and Development Program. Several of our varieties have already achieved general recognition as leaders of their species after processing, storage and cooking. Other varieties specially adapted to the needs of this new industry are in process of development.

It may well be that further experience or changes in methods of processing will demonstrate the suitability for freezing of other species and varieties than those listed herein. Reference for additional information may then be made to our Descriptive Catalogue, in which most of the well known varieties are listed.

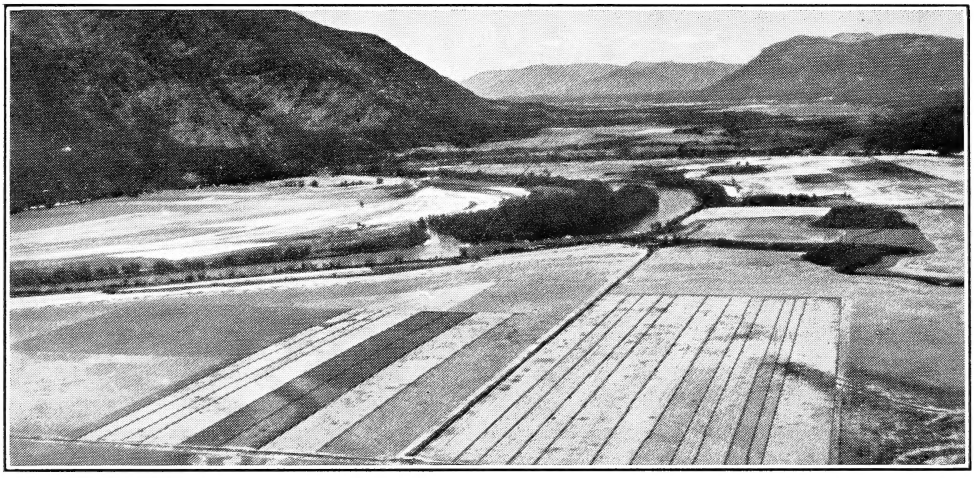
Conditions of climate and soil vary so considerably in different parts of the country that differing results may possibly be had from the same variety in the same year. Some experimentation may be necessary to determine the varieties best suited to a particular locality though in most cases we shall be glad to make recommendations. To any of our customers who feel that the facilities of our Breeding Grounds and Laboratories may be of help in the solution of their problems we extend an offer of co-operation in research, breeding and development.

Associated Seed Growers, Inc.

New Haven, Conn.
March 25, 1937.

VEGETABLE VARIETIES
Suitable for Quick Freezing

It should be noted that the descriptions given throughout this catalogue apply particularly to Asgrow strains. Our stocks of many older varieties have been greatly improved through continual work on our breeding grounds.



In the foreground of this aerial view in the Northwest are 220 acres of increase blocks of pure-lined Asgrow strains of peas. Continual breeding work is necessary, not only to develop new and improved strains but also to maintain established varieties, which, without constant care, tend to revert to mediocrity. This work is carried on in Asgrow Breeding Grounds both in the Northwest and in other parts of the country best suited for adaptation and other particular needs.

ASPARAGUS

A profitable vegetable for the frozen pack because of its short season in the fresh market, but year around popularity with consequent high prices. Should be processed as soon as possible after cutting.

Culture: Sow the seed in the spring in drills about 18 inches apart in light, rich soil. Place seeds one inch apart and cultivate regularly during the summer; plants will be ready to set in the field the following spring. One ounce of seed will produce 700 plants. Deep plowed soil, rich in humus and well drained is best for this crop. Plants should be set 4 to 5 inches deep, spaced 1 foot, in rows 4 feet apart.

MARTHA WASHINGTON
The original rust resistant variety; heavy yielding, with large dark green stalks; of fine quality.

MARY WASHINGTON
The latest development of rust resistant asparagus; larger than the original Washington, with uniform spears and very tight tips of fine quality; heavily productive; of medium season.

BEANS

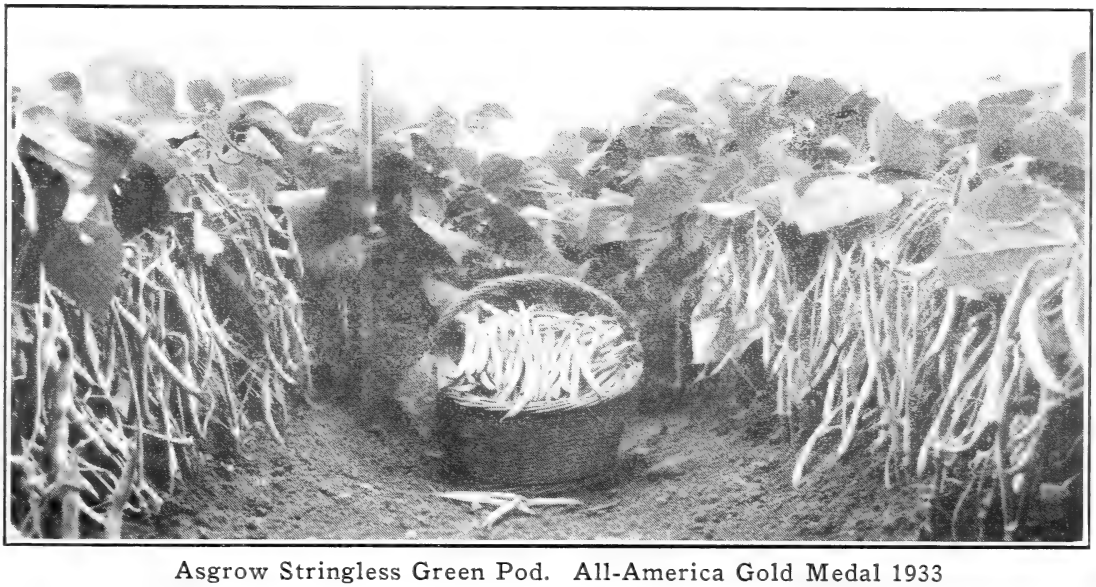
For the frozen pack only varieties of high quality are to be recommended. The pods should be straight, meaty, stringless and fiberless; clear in color and sufficiently tender in texture to avoid any risk of loss of color through requiring prolonged cooking; skin should be smooth and not given to splitting or sloughing.

In listing the number of days from planting to picking, we have used average results secured over a period of years. These figures apply to plantings under normal rainfall conditions, and will vary somewhat in different sections of the country. However, the number of days indicated is valuable in showing the relative earliness of the different varieties.

Culture: For best results beans require strong, well-drained, loamy soil. In the North, plantings should be made after danger of frost is past, during latter May and early June. Plant 4 to 6 seeds to the foot, 1½ to 2 inches deep in rows 24 to 30 inches apart depending on the richness of the land. It takes about 50 to 60 pounds of seed to plant an acre.

Green Podded, Dwarf or Bush Varieties

	Length of pod inches	Width of pod inches	Days from planting to picking
ASGROW STRINGLESS GREEN POD ..... Our recent development. Received All-America Gold Medal Award for 1933. A handsome variety, for a frozen pack of fine appearance and quality. Similar to Full Measure, but hardier, and a more dependable cropper. Plant medium large, erect, somewhat thick stemmed, heavily productive. Pods nearly straight, dark green, round, meaty, succulent; stringless, totally without fiber. Seed 67 per oz., oblong, purple mottling on buff with brownish cast. Tendergreen is a similar variety.	6 to 6½	⅜	53
BOUNTIFUL ..... The most popular of the flat-podded type; has given quite good results under freezing. Plant medium-large, prolific, thrifty. Pods flat, light green, stringless and of good quality, but inclined to develop fiber if not picked early. Seed yellow-straw color, 65 per oz.	6½ to 7½	½	49
GIANT STRINGLESS GREEN POD ..... This favorite stringless green podded sort has fully maintained under freezing its fine reputation. Plant large, sturdy, prolific. Pods round, meaty, strictly stringless and brittle; with indentations between the beans; color medium green. Seed 72 per oz., oval, solid yellowish brown.	6 to 6½	7/16	54



Asgrow Stringless Green Pod. All-America Gold Medal 1933

BEANS—Continued

	Length of pod inches	Width of pod inches	Days from planting to picking
KEENEY'S STRINGLESS GREEN REFUGEE ..... Our development, introduced in 1908. A medium late variety very popular with canners. Plant large, very spreading, with many tendrils and drooping branches; heavily productive. Pods silvery green, round, absolutely stringless, brittle, without fiber. Seed violet-purple, splashed with pale buff; 97 per oz.	5 to 5½	3/8	70

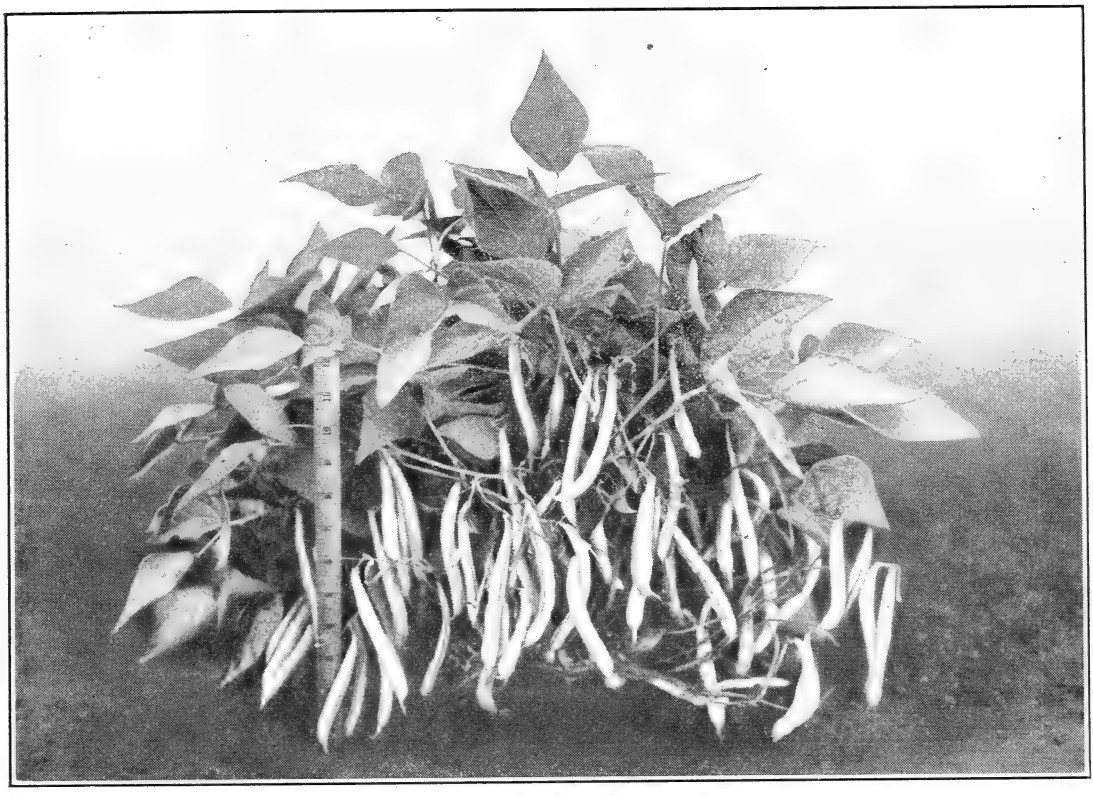
MOSAIC RESISTANT STRAINS OF STRINGLESS GREEN REFUGEE

These excellent new varieties are of importance both for disease resistance and satisfactory performance in frozen processing.

IDAHO REFUGEE ..... Developed by Dr. J. C. Walker and Dr. W. H. Pierce cooperatively and introduced by the University of Idaho in 1934; resistant to common bean mosaic. Plant of true Refugee type and strongly prolific. Pods longer than regular Refugee, straight, round, silver-green, stringless, without fiber; seed purple-blue splashed with buff. 6 days earlier than Keeney's Stringless Green Refugee and Wisconsin Refugee.	5⅜	3/8	64
WISCONSIN REFUGEE ..... Developed by Dr. J. C. Walker and Dr. W. H. Pierce cooperatively and introduced by the University of Wisconsin in 1934; resistant to common bean mosaic; in season and plant character very similar to Keeney's Stringless Green Refugee. Pods slightly curved, medium long, round, stringless, of fine quality. Seed violet-purple splashed with pale buff.	5 to 5¼	3/8	70
STRINGLESS GREEN POD, IMPROVED ..... Originally introduced as Burpee's Stringless Green Pod. Since its origination in 1894 by Calvin N. Keeney we have markedly improved the shape and length of pod of this early, sturdy, stringless variety. Plant large, erect, very productive. Pods round, medium green, very meaty, fully stringless and fiberless and of excellent quality. Seed coffee-brown, 75 per oz.	6	7/16	52

Giant Stringless Green Pod. A popular Asgrow variety

BEANS—Continued



Idaho Refugee, the New Mosaic Resistant Bean

Wax Podded, Dwarf or Bush Varieties

The wax podded sorts lend themselves to a very attractive pack.

	Length of pod inches	Width of pod inches	Days from planting to picking
ROUND POD KIDNEY WAX OR BRITTLE WAX... Originated by Calvin N. Keeney, and introduced in 1900. An outstanding sort for freezing. Plant large, erect, medium green, vigorous and moderately productive. Pods handsome in appearance, medium yellow, round, slightly curved, deeply creasebacked, extremely brittle, fleshy, succulent, absolutely stringless and fiberless; the standard of highest quality. Seed white, kidney shaped, with black eye; 78 per oz.	5½ to 6½	⅜	58
KEENEY'S IMPROVED STRINGLESS KIDNEY WAX Introduced in 1908. Excellently adapted for freezing. Plant large, erect, reasonably productive. Pods oval, light yellow in color, brittle, stringless, fleshy, and of fine flavor. Seed white, kidney shaped with black eye; 75 per oz. Sometimes called New Stringless Kidney Wax.	5½ to 6¾	5/16	58
PENCIL POD BLACK WAX ..... Originated by Calvin N. Keeney; introduced in 1900. A handsome, early and productive variety. Plant large, stocky, vigorous and strongly productive. Pods round, slightly curved, fleshy, golden yellow, tender, entirely stringless, without fiber, brittle and of finest quality. Seed oblong, slightly flattened, 88 per oz., solid black.	6½ to 7	7/16	55

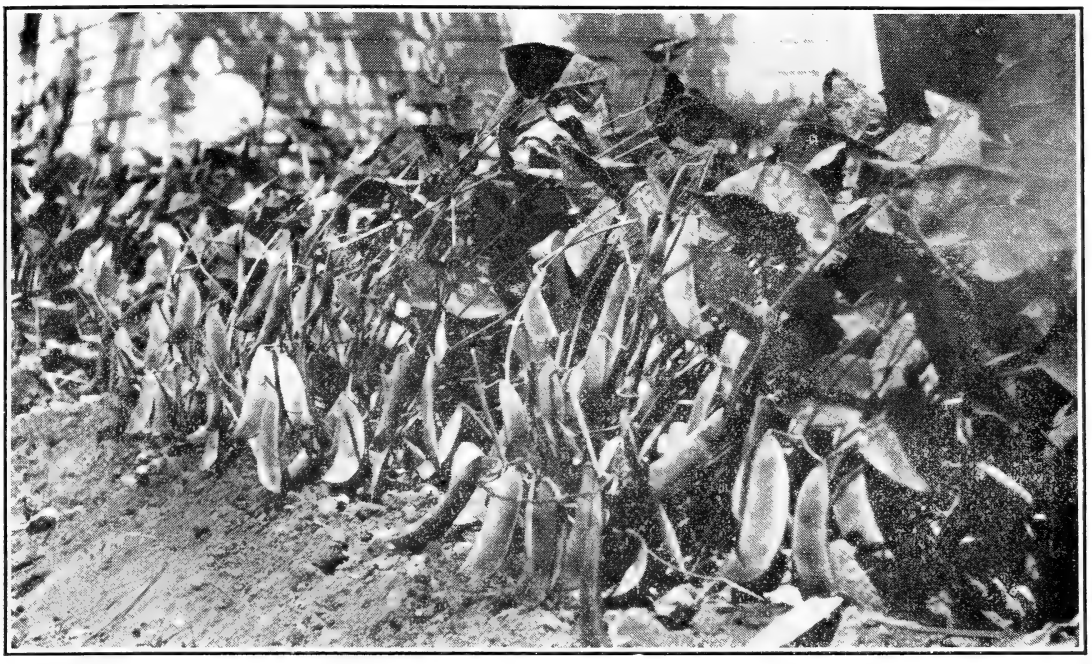
BEANS—Continued

Green Podded Pole Varieties

Culture: Sandy loam, well-enriched, is the best soil for pole beans. Plant in hills 4 feet each way 4 to 6 seeds, to the hill about 2 inches deep. Poles 6 feet above ground should be set for the beans to climb on. It requires 30 to 35 pounds of seed to plant an acre.

	Length of pod inches	Width of pod inches	Days from planting to picking
BLUE LAKE ..... Early, vigorous, strongly productive; a good climber. One of the most widely used in the West for the frozen pack. Snap pods round, medium green, fleshy, stringless when young, tender and of fine quality. Seed small, oval, ivory white; 120 per oz.	5 to 6	½	63
KENTUCKY WONDER ..... The best known and most popular pole bean. For a frozen pack outstanding in color and texture, retaining after cooking these features and also the fine flavor for which Kentucky Wonder is so well known. Strong climber, hardy, very prolific over long season. Pods nearly round, curved, with undulating surface, meaty, of good quality; stringless when young, fiberless, very brittle. Seed 80 per oz., buff brown. Our special strain bred particularly for processing is highly free from flat pods.	7½ to 8½	½	65
WHITE KENTUCKY WONDER ..... Has performed extremely well in 1936 freezing tests. Plant medium, 4 to 5 feet tall, good climber. Pods round, slightly curved, bright green, tender, fleshy, stringless, fiberless, and of good quality. Seed oval-flat, white, 90 per oz.	6 to 7½	½	64

Kentucky Wonder progenies on one of our western breeding grounds



Henderson's Bush Lima

The Asgrow strain is early and concentrated in season

Lima Beans, Bush

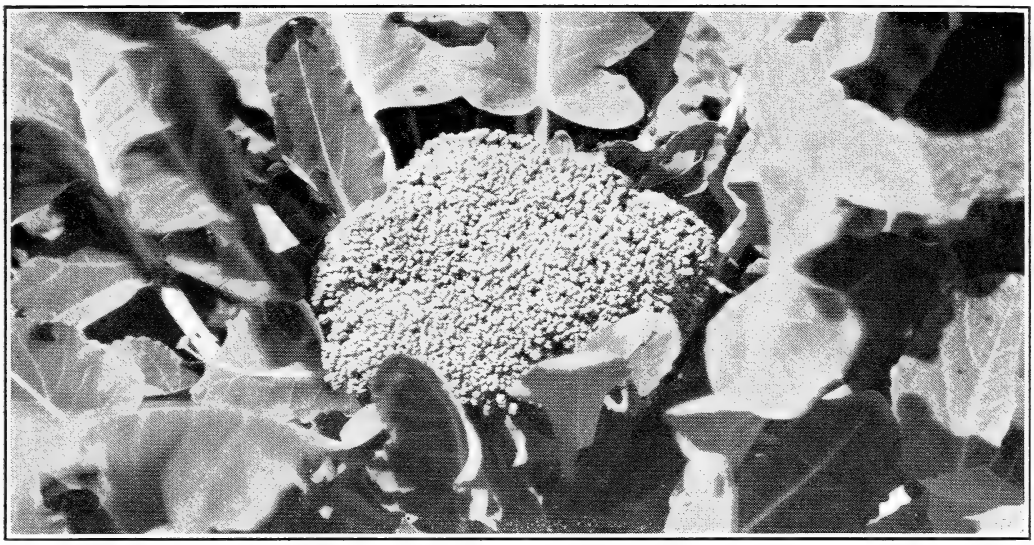
Lima beans hold their shape and color well under frozen processing and give an excellent pack either alone or in succotash.

Culture: Lima beans are particularly susceptible to injury from cold, wet weather and therefore should not be planted until two weeks later than string beans. Sandy loam well manured or heavy sod plowed deeply is the best foundation for producing crops of this item. In some areas lima beans are planted in latter June as a second crop after peas in which case only moderate yields can be expected. Sow seed 1½ to 2 inches deep in rows 22 to 28 inches apart with 3 to 5 seeds to a foot in the row. 40 to 50 lbs. of seed are required to plant an acre.

	Length of pods inches	Width of pods inches	Days from planting to picking
FORDHOOK BUSH ..... Potato lima type mostly used in succotash. Plant large, upright, vigorous, highly productive. Pods straight, with thick fibrous walls; contains 3 to 4 seeds. Green shelled beans large, thick-oval, green of excellent quality. Dry beans white with tinge of green; 22 per oz.	4 to 4½	1	75
HENDERSON'S BUSH ..... By far the most extensively used for freezing. The Asgrow strain developed through a period of years by intensive breeding is exceptionally uniform in plant growth and more concentrated and earlier in season than standard stocks, resulting in a larger percentage of green beans at picking stage. Plant small, dark green, erect, bushy, very early. Pods flat, contain 3 to 4 seeds. Green shelled beans flat, small, of excellent color and quality.	3 to 3¼	¾	65

Lima Beans, Pole

KING OF THE GARDEN ..... Has given good results in frozen succotash. Plant tall, good climber, vigorous, heavily productive. Pods flat, smooth, with 4 to 5 large beans. Seed large, flat, white, 25 per oz.	6 to 7	1¼	88



Italian Green Sprouting Broccoli, increasingly popular

BROCCOLI

This delicious vegetable retains its texture and color well through freezing and has proven a popular pack. It should be processed directly after picking.

Culture: Sow seed in plant bed in early May in rows 8 to 9 inches apart and plants will be ready to transfer to field in June. Set plants 1½ feet apart in rows 3 to 3½ feet apart. Rich soil with plenty of moisture is needed for strong development and tender stems and heads. 4 ounces of seed will plant an acre.

Days from setting of plants to first cutting

ITALIAN GREEN SPROUTING (CALABRESE) ..... 55 to 65

A tall branching plant forms a central compact head of bluish green flower buds resembling a loose head of Cauliflower. After the main head is removed, side branches continue to develop throughout the season, and frequently form small heads which, with a small part of the stem, are cut and frozen.

BRUSSELS SPROUTS

One of the latest additions to the list of quick frozen vegetables and likely to be popular because of the trim appearance in the carton of these miniature cabbages.

Culture: This crop requires very much the same treatment and conditions as cauliflower. It will grow in any soil that is good for cabbage provided it is well cultivated and reasonably enriched. Care should be taken not to overfeed the plants which may lead to the sprouts becoming coarser and larger than is desirable for canning. Rows should be 3 feet apart with 1½ to 2 feet between plants. Four ounces of seed will produce enough plants for an acre.

HALF DWARF IMPROVED 70

Plants 20 to 24 inches tall; stem thickly set with firm Cabbage-like balls of 1½ inch diameter, maturing successively.

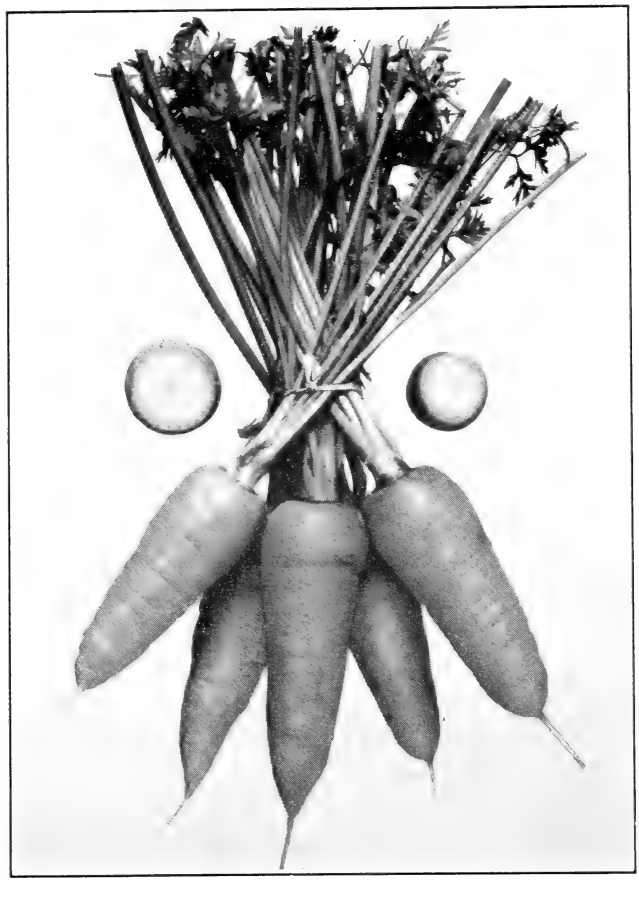
LONG ISLAND IMPROVED 70

Similar to the above but a little more dwarf in habit of growth. Compact, firm buttons with dish shaped leaves.

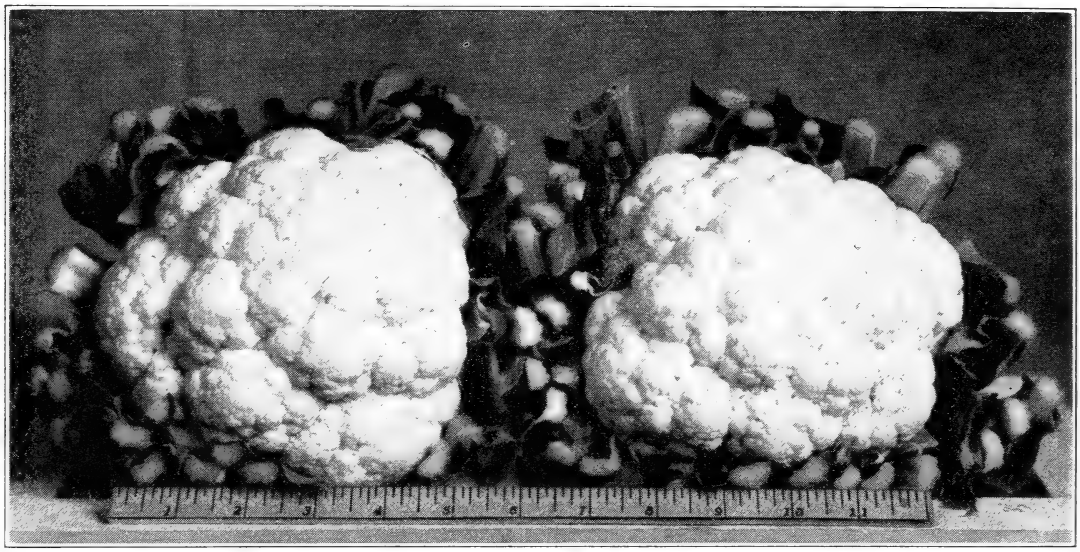
CARROT

Culture: For best development carrots require rich, sandy loam soil plowed deeply, and well drained. For field planting sow seed in rows 2 to 2½ feet apart to allow for machine cultivation; for smaller plots to be cultivated by hand, 18 inches between rows is sufficient. 3 to 5 pounds of seed are required to plant an acre.

	Length of root inches	Diameter at shoulder inches	Days from planting to pulling
AMSTERDAM CORELESS ..... Half-long, cylindrical and stump ended sort for forcing or field growth. Tops short, flesh orange-red, tender and sweet.	4 to 5	1	67
CHANTENAY, RED CORED ..... Excellent for dicing. A desirable Chantenay with good interior color. Roots somewhat shorter than Improved Chantenay; flesh reddish orange, with indistinct core of nearly the same color as the surrounding flesh; tender and sweet.	4½ to 5½	2¼	72
NANTES IMPROVED CORELESS ..... A trim cylindrical carrot for packing whole. Tops very small. Roots bright orange, straight, blunt ended. Flesh reddish orange, crisp, tender, and of very delicate flavor; practically coreless.	5½ to 7	1⅜	70



Red Cored Chantenay Carrot



Snowdrift has large, firm and very white heads

CAULIFLOWER

A compact, smooth head free from riciness is always desirable, and for the best frozen pack it is necessary. Care must be taken in handling and processing to avoid wilting.

Culture: Sow seed in plant bed in drills 9 inches apart in May and transplant to fields in latter June or early July in rows 3 to 4 feet apart with 1½ to 2 feet between plant in the row. Deep rich soil with an abundance of moisture is necessary for good crops. Frequent cultivation with top dressing of fertilizer insures rapid growth and delicate flavor. For blanching, the leaves should be gathered loosely and tied over the top of the head. 4 ounces of seed will produce plants sufficient to set an acre.

	Diameter of head inches	Days from setting of plants to marketable heads
EARLY SNOWBALL ..... The best and most widely used early variety. Plant dwarf, with short pale green leaves. Heads medium, firm, compact, solid, pure white, and of finest quality; a dependable header.	6 to 7	55
PERFECTION ..... A main crop sort of Early Snowball type, with somewhat larger heads, and several days later in maturing which has been successfully used for freezing. Heads large; weigh 2 to 2¼ pounds; compact, snow-white, and very attractive.	7	58
SNOWDRIFT ..... One of the best varieties for shipping long distances. Plant of medium height with upstanding, medium green outer leaves. Head slightly larger than Snowball, firm, solid, very white, well protected by inner folding leaves: curd has fine texture and is free from small protruding leaves.	7to 8	57
SUPER-SNOWBALL ..... A highly desirable main crop variety, also used for early planting. Starts heading early and uniformly. Heads medium large, compact, very white; much used in fresh vegetable industry and has given very satisfactory results in Eastern freezing.	7 to 7½	56

SWEET CORN

One of the triumphs of quick freezing is the preservation of sweet corn, either as whole kernel or as corn-on-the-cob, with remarkably little change of flavor, texture or color. The physiological changes that begin as soon as an ear has been picked make prompt handling imperative and the sooner processing is completed the more satisfactory will be the product.

Sweet Corn has been an important item with us for nearly eighty years, during which time we have originated a number of the best known varieties. Our breeding program includes the development of disease resistant strains as well as emphasizing the factors of uniformity in type, tenderness of hull and productivity.

Through the use of more recent breeding methods for the improvement of Sweet Corn varieties, we have developed during fourteen years of controlled pollination a number of inbred lines of high merit. The crossing of these produces hybrids of outstanding vigor, uniformity and productivity. Likewise the top-crossing of inbreds on open-pollinated stocks gives uniformity and yields far in advance of those obtained from standard stocks.

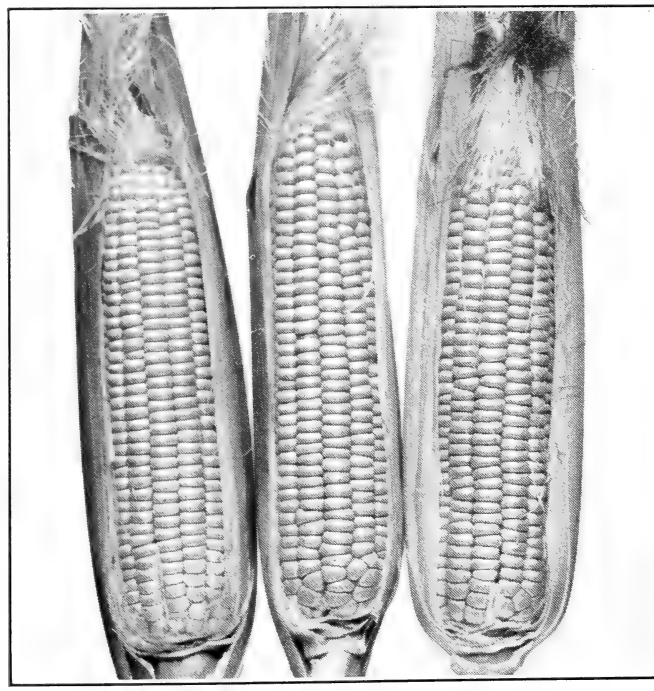
From these years of experience and from trial plantings in canners' fields and at Agricultural Experiment Stations in various states, we are in position to recommend to our customers the particular hybrids or top crosses best adapted to their sections.

HYBRIDS

Yellow Varieties

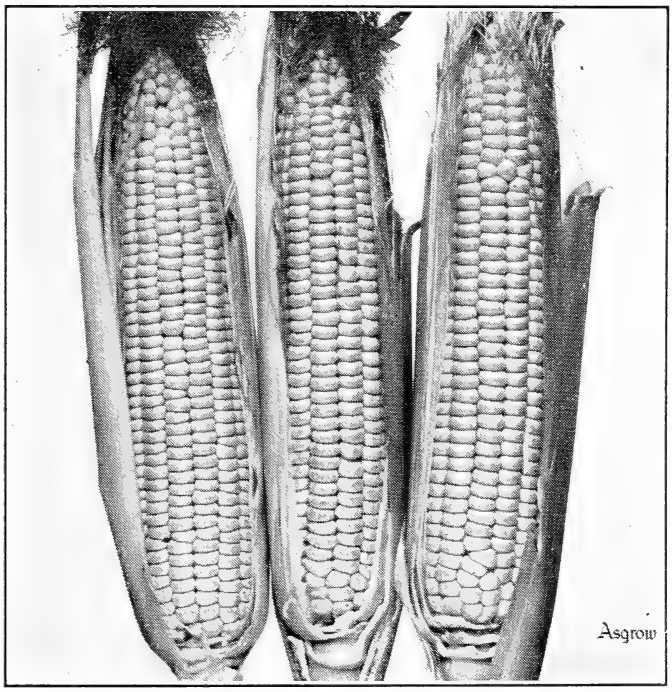
	Height of stalk feet	Length of ear inches	Days from planting to eating stage
BANTAM (or Golden) EVERGREEN HYBRID	8	8	89

Our own development from crossing inbred lines Asgrow 24 x Purdue 39; introduced in 1930. Has been given highest ranking for the frozen pack. Stalk upright, sturdy, uniform; leaves wide, dark green. Ears cylindrical 14 to 16 rowed. Kernels golden yellow, medium wide and deep, with tender hull, sweet and of excellent quality.



Bantam Evergreen Hybrid
Particularly desirable for freezing

SWEET CORN—Continued (Hybrids)



Golden Cross Bantam

	Height of stalk feet	Length of ear inches	Days from planting to eating stage
GOLDEN CROSS BANTAM ..... Developed by Glenn M. Smith and introduced jointly by the United States Department of Agriculture and Purdue University Agricultural Experiment Station. This popular hybrid has been extensively used for freezing and has yielded an excellent product. Stalk sturdy, with exceptionally broad, vigorous leaves. Ears 10 to 14 rowed, slightly lighter yellow than Golden Bantam. Kernels medium in width and depth. This hybrid is extremely uniform in plant and ear characteristics and in maturity. Highly resistant to Stewart's disease.	6	7½ to 8	88

Hybrid sweet corn: a crossing field on one of the Asgrow breeding farms. The lighter rows are pollen parents; the others, which have been detasseled, furnish the seed.

SWEET CORN—Continued (Hybrids)

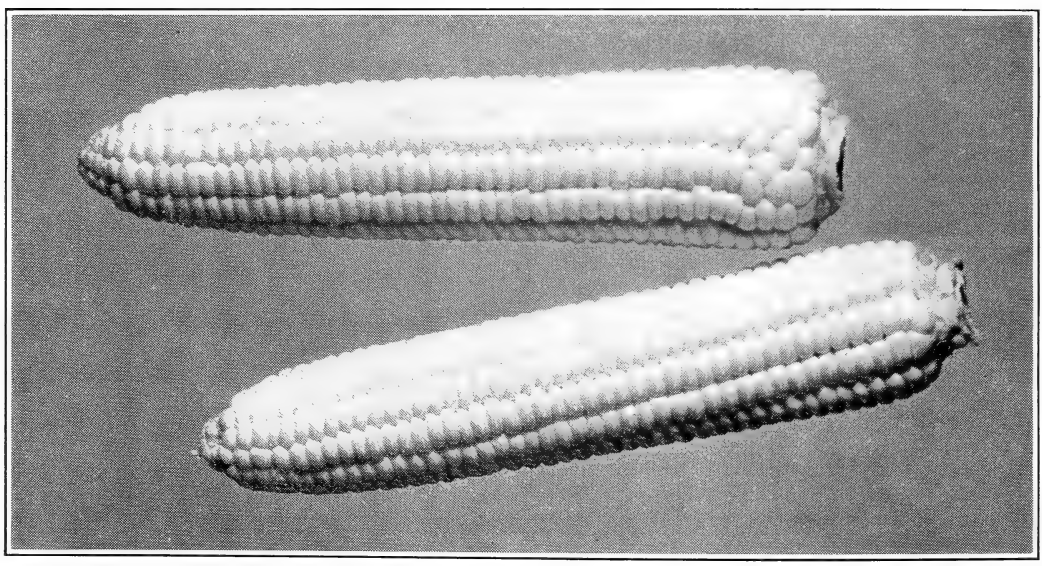
	Height of stalk feet	Length of ear inches	Days from planting to eating stage
MINHYBRID NO. 202 ..... A development of the Minnesota Agricultural Experiment Station particularly desirable for packing corn-on-the-cob; one of the few eight rowed yellow hybrids. Stalk sturdy, medium tall. Ears predominately eight rowed. Kernels medium large, yellow, of quality comparable with Golden Bantam; cob extremely small. This variety is probably best suited to areas with short season and long days.	5 to 6	6 to 8	76
TOP CROSS BANTAM ..... Our introduction developed from crossing a drought resistant Golden Bantam and a prepotent inbred; introduced in 1931. Placed in first rank in recent freezing tests. Similar in plant characteristics to Golden Cross Bantam but not quite as uniform. Stalk sturdy with vigorous leaves. Ears 10 to 14 rowed; color deep yellow, similar to Golden Bantam. Kernels medium, tender and sweet. Highly resistant to Stewart's disease and very productive.	6	7 to 7½	86
TOP CROSS MAINE BANTAM ..... One of our recent developments particularly adapted for short season areas; introduced in 1934. Stalk sturdy with deep green foliage; ear as long as Golden Cross Bantam and somewhat thicker, very slightly tapered with 10 to 14 rows; kernels deep yellow, tender and of excellent flavor. Very successful results are being obtained from this new introduction. Highly resistant to Stewart's disease.	5½ to 6	7 to7½	82
TOP CROSS WHIPPLE'S YELLOW or Whipcross P39 .. This very uniform intermediate top cross was developed primarily for home and market garden use, but in freezing tests has been given the rating Good. Stalk sturdy with strong foliage; highly resistant to Stewart's disease; ears 12 to 14 rowed, well filled at tip; kernels golden yellow of medium length and good flavor. It is very prolific.	7	7½	84

Many experimental crosses are made on our Corn Breeding Grounds each year in the evolution of hybrids. In this way outstanding combinations are developed.

SWEET CORN—Continued (Hybrids)

White Varieties

	Height of stalk feet	Length of ear inches	Days from planting to eating stage
ASGROW SHOEPEG HYBRID (19 x 9) ..... Our introduction developed from crossing inbred lines Asgrow 19 x Asgrow 9. Stalk sturdy, upright with ears 3½ to 4 feet from ground. Ears long, cylindrical, well filled at tip. Kernels very fine and deep, tender and of excellent quality.	8½ to 9	8	93
ASGROW COGENT HYBRID (19 x 24) ..... Another Country Gentleman Hybrid of our breeding; introduced in 1929. Has a somewhat thicker ear and larger kernel type than Hybrid 19 x 9. Well adapted for areas of heavy, rich soil in the Eastern States. Stalk erect with good foliage and strongly prolific. Ears medium long, slightly tapered, well filled at tip.	8 to 9	7½	93
CROSGREEN ..... A top cross line developed by crossing a Stowell's Evergreen inbred on Early Crosby. Uniform and fairly prolific. Good for packers in areas of medium length season. Stalk sturdy with heavy foliage. Ears quite large, slightly tapered, 14 to 18 rowed; kernels medium wide and deep, cream white; cob medium.	6 to 6½	7 to 8	86



Redgreen—a white hybrid

REDGREEN ..... Developed by Dr. D. F. Jones of the Connecticut Agricultural Experiment Station. On account of strong close-fitting husks it is quite resistant to ear worms. Stalk upstanding, frequently develops two ears; foliage reddish green. Ears cylindrical, slender, 12 rowed. Kernels very white, not as deep as Evergreen; cob small.	9	8 to 8½	95
STOWELL'S EVERGREEN HYBRID (14 x 5) ..... Our development from crossing inbred lines Asgrow 14 x Asgrow 5. Introduced in 1930. Received All-America Special Mention for 1934. Has achieved the highest ranking in Eastern freezing tests. Stalk sturdy with close growing upright ears, 4 feet from ground; foliage medium green. Ears very slightly tapered, uniform, with 16 to 18 rows. Kernels white, medium wide, deep; medium cob.	9	9 to 9½	96

SWEET CORN—Continued

OPEN-POLLINATED

Yellow Varieties

	Height of stalk feet	Length of ear inches	Days from planting to eating stage
ASGROW GOLDEN COLONEL ..... One of our recent developments, a cross between Country Gentleman and Golden Bantam. Received All-America Award of Merit for 1936. Identical in stalk and ear characteristics with Country Gentleman except for its golden color. Its dainty shoe peg kernels are very attractive but it must be processed promptly after picking.	7 to 8	7 to 7½	91
BANTAM EVERGREEN ..... Also known as Golden Evergreen. Bred by the Everett B. Clark Seed Company and introduced in 1910. A cross of Golden Bantam on Stowell's Evergreen having Evergreen type of ear with 14 to 18 rows. Kernels rich, golden yellow, deep, with tender hull, sweet, and of fine quality. A superior medium late variety which has been outstandingly successful in the frozen pack.	7 to 8	7 to 8	89
GOLDEN BANTAM ..... Probably the most extensively grown of the open-pollinated yellow varieties but susceptible to bacterial wilt. Stalks often have 2 ears. Ears 8 rowed; kernels broad, with tender hull, sweet, and of very fine flavor.	5 to 5½	6 to 6½	80
GOLDEN BANTAM, IMPROVED 10-14 ROWED ..... Our development introduced in 1922. A selection from the original strain of Golden Bantam resulting in a larger ear with more rows and greater productivity. Ears 10 to 14 rowed, uniform and attractive. Kernels golden yellow, medium wide, deep, sweet, and of fine flavor; remain tender longer than regular Golden Bantam. Of highest rank in freezing tests.	5½ to 6	6 to 6½	84

OPEN-POLLINATED

White Varieties

COUNTRY GENTLEMAN or SHOE PEG ..... A late prolific variety of excellent quality, used widely by canners. Stalk often with two ears. Kernels very deep, slender, sweet, with tender hull, and set irregularly without row formation; 230 per oz.	7 to 8	7 to 7½	93
MONEY MAKER ..... Used by freezers as a late maturing, small-eared variety of excellent flavor and texture. Ears fairly thin. 8 to 12 rowed.	7 to 7½	6 to 7	100
NARROW GRAIN (MIDWEST) EVERGREEN ..... A particularly high-yielding strain with exceptionally attractive ears, 16 to 22 rowed. Deep, slender white kernels, of tender hull, sweet and of fine flavor.	8 to 10	7 to 8	95
STOWELL'S EVERGREEN ..... The best known late variety of Sweet Corn; a stock first grown in 1847 by Nathan Stowell at Burlington, N. J. Has maintained under freezing its deservedly high reputation, having been placed in the First Class in tests. Stalk sturdy and erect; ears 2½ inches thick, uniform, 16 to 20 rowed. Kernels clear white, deep, rather broad, sweet and tender; 112 per oz. Holds well in prime condition at eating stage.	8 to 10	8 to 9½	95

Planting Scene at one of our Pea Breeding Stations. The most modern methods are used throughout

PEAS

Those who have once tasted quick-frozen peas will need no commendation of this remarkably successful product. The natural flavor, color and texture have been wonderfully preserved, especially in such varieties as Dark-podded Thomas Laxton, Asgrow No. 40 and the larger sieve sizes of Alderman.

By breeding pedigreed stocks through generations of pure-line cultures, we are continually improving existing leading varieties of peas. This intensive process, supported by careful inspection and checking of field crops, produces exceptionally high grade stocks. In addition to maintaining standard varieties, new strains are developed by means of hybridization and selection, which enable us to combine desirable plant characters such as disease resistance, productiveness, and quality of two or more parents in new and more useful introductions.

We have indicated in the number of days from planting to picking, average results under normal rainfall conditions. These figures will be of assistance in comparing the relative earliness or lateness of the various varieties when planted in any locality.

Culture: Peas are grown successfully on various types of well-drained, non-acid, mellow soils but deep fertile loam with some clay mixture is best under rainfall conditions. In western areas, under irrigation, lava ash and loess with good humus content produce the most satisfactory crops. Fall plowing is recommended, also application of lime where needed. Sow seed broadcast with grain drill as soon as land can be properly worked in the spring. When commercial fertilizer is used, direct contact between seed and fertilizer should be avoided. 3½ to 4½ bushels are required to plant an acre.

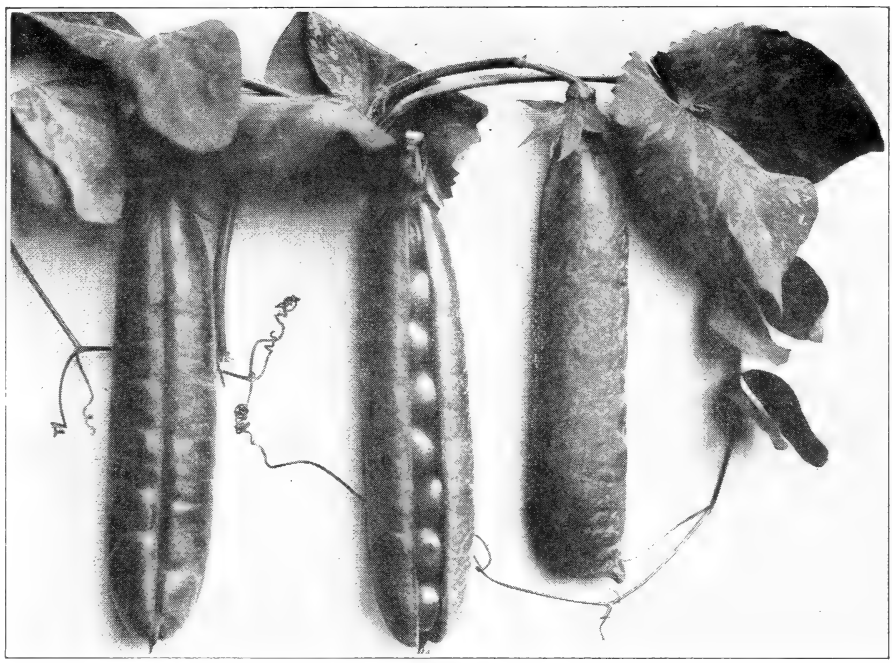
Wrinkled Seeded Varieties
Early and Second-Early

	Height of vine inches	Length of pod inches	Days from planting to picking
ASGROW TETON ..... Developed on our Montana Pea Breeding Grounds, and available in 1938. A hybrid variety fully resistant to Fusarium wilt. Excellent for market gardens, shipping, canning and freezing. Vine dark green, medium heavy. Pods single, large, straight, blunt, dark green, concentrated in season; well filled with 7 to 8 large, succulent peas of very fine quality. Frozen peas semi-round, olive green; sieve sizes 3 to 7. Seed large, cream and green, wrinkled.	32 to 36	3¾ to 4	65

PEAS—Continued

	Height of vine inches	Length of pod inches	Days from planting to picking
HUNDREDFOLD ..... A very attractive, early, large podded sort, resembling Laxtonian, for shipping, canning and freezing. Vine very dark green, stout, has tendency to develop "spikey" top. Pods single, broad, very deep green, pointed, curved; contain 8 large peas of excellent quality. Frozen peas oblong, dark green; sieve sizes 3 to 7. Seed large, wrinkled, yellow and green, somewhat flat.	18 to 20	4¼	63
LAXTONIAN—BLUE BANTAM STRAIN ..... The best known of the early, dwarf, large podded sorts. Used for shipping, canning and freezing. Vine dark green, rather coarse; "tops off" well at maturity. Pods single, broad, dark green, slightly curved, pointed; contain 7 to 8 large, succulent peas. Frozen peas oblong, deep green; sieve sizes 3 to 7. Seed large, flattish, yellow and green, wrinkled.	18	4½	62
LAXTON'S PROGRESS ..... Developed by Laxton Bros. and introduced in 1922. The largest podded and most attractive of the Laxtonian family. Popular for shipping, garden planting and for canning and freezing. Vine medium dark green. Pods single, ⅞ inch wide, dark green, somewhat curved, pointed, handsome; contain 7 to 9 large peas of good quality. Frozen peas oblong, deep green; sieve sizes 3 to 7. Seed large, cream with green, wrinkled. Our strain of this important variety is noted for its solid deep green color. Has yielded a good product in the Northwest but in Eastern tests showed a tendency to starchiness.	16 to 18	4½ to 5	62

One of our new introductions—Asgrow Teton



Dark Podded Thomas Laxton: outstanding for the frozen pack

THOMAS LAXTON, DARK PODDED ..... 30 to 36 3½ to 3¾ 63
Original light-colored strain introduced by Laxton Bros. in 1898. Our improved dark podded strain retains the earliness of the first introduction but is more attractive in both vine and pods. Of highest excellence for freezing. Vine deep green and medium heavy. Pods single, rich deep green, plump, broad, blunt; contain 7 to 8 large, tender peas of splendid quality. Frozen peas semi-round, olive green; sieve sizes 3 to 7. Seed of medium size, cream and green, wrinkled.

WORLD'S RECORD, IMPROVED ..... 24 to 26 3¾ to 4 61
Vine light green, medium heavy. Pods single, medium green, pointed, broad, plump; contain 7 to 8 large tender peas of fine quality. Frozen peas oblong, deep green with thin skin; sieve sizes 3 to 7. Seed large, cream and green, wrinkled. Our strain is noted for earliness and size of pods.

The development of varieties resistant to disease is an important part of the Asgrow Breeding Program. In the rows shown here, susceptible and resistant strains are growing together on "sick" soil.

PEAS—Continued Midseason Varieties

	Height of vine inches	Length of pod inches	Days from planting to picking
ALDERMAN or DARK PODDED TELEPHONE (Tall) A handsome large podded variety of the Telephone family. Excellent for freezing. Vine dark green, coarse; resistant to Fusarium wilt. Pods single, very broad, plump, straight, dark green, pointed; contain 8 to 10 peas of highest quality. Frozen peas oblong, dark green; sieve sizes 3 to 7, and a few larger. Smaller sizes should not be frozen as they tend to lose their flavor. Seed large, wrinkled, light green.	40	4½ to 5½	74
ASGROW NO. 40 ..... Our introduction in 1932. Resembles Stratagem, but 4 to 5 days earlier; unexcelled in pod size, and exceptional in quality; resistant to Fusarium wilt. It has proven to be of exceptional merit for freezing, ranking with our Dark-podded Thomas Laxton (12 days earlier) in the First Class. Vine dark green, stocky and branching. Pods single and double, round, dark green, plump, pointed, curved at tip; contain 8 to 10 large, succulent peas. Frozen peas large, oblong, dark green; sieve sizes 3 to 7 and a few larger. Seed large, wrinkled, green.	26	5 to 6½	75

Asgrow No. 40
Exceptionally well adapted for freezing

PEAS—Continued

	Height of vine inches	Length of pod inches	Days from planting to picking
NO. 76 ..... A large podded, mid-season, dwarf variety ranked Very Good in freezing tests. Vine medium green, sturdy, somewhat coarse. Pods dark green, single, plump, curved, pointed; contain 7 to 9 peas. Seed large, cream with green, wrinkled.	22	4½	68
DWARF ALDERMAN ..... Desirable for market gardens and shipping; used also for freezing; of good size but type not completely fixed. Vine dark green, stocky, branching, resistant to Fusarium wilt. Pods single and double, dark green, plump, pointed, slightly curved; contain 7 to 9 large peas of good quality. Frozen peas oblong, dark green, sieve sizes 3 to 7, and a few larger. Seed large, green, wrinkled.	24	4½	76
GRADUS, IMPROVED ..... A popular second early, large podded variety for gardeners and for freezing. Vine medium green, stocky. Pods single, broad, plump, pointed, medium green; contain 8 to 10 large, sweet, delicious peas. Frozen peas oblong, deep green, tender; sieve sizes 3 to 7. Seed large, wrinkled, cream and green.	36	4	65
LITTLE MARVEL ..... One of the older varieties of dwarf peas, still extensively used on account of its exceptional yield and fine quality, though rather small in size. Vine dark green, medium, stocky. Pods single and double, dark green, blunt, plump, well filled with 7 to 8 tender peas. Seed medium size, light green, sqrarish, wrinkled.	18	3	62
ONWARD ..... A medium late variety, very fine in quality and of strong productivity; good for freezing where large size, tender peas are desired. Vines medium light green with heavy stem and foliage. Pods single and double, ¾ inch wide, medium green, blunt, straight, attractive; contain 6 to 8 large, succulent peas. Frozen peas, oblong, dark green; sieve sizes 3 to 7. Seeds large, green wrinkled.	27	4	74
PRESIDENT WILSON ..... Developed by Sutton and Sons and introduced in 1919. A handsome second early dwarf variety, with exceptionally large, attractive pods. Used by market gardeners and for freezing. Vine very dark green, stocky, with large leaves. Pods single, broad, plump, pointed, slightly curved, rich deep green; contain 8 to 9 large succulent peas. Frozen peas oblong, dark green; sieve sizes 3 to 7, and a few larger. Seed large, wrinkled, green.	20	5	65
STRATAGEM, IMPROVED ..... A superior late variety for freezing; resistant to Fusarium wilt. Vine deep green, stocky, and branching. Pods single and paired, ⅞ inch wide, nearly round, straight, pointed, dark green; contain 8 to 10 tender, succulent peas. Frozen peas oblong, dark green; sieve sizes 3 to 7, and a few larger. Seed large, wrinkled, green.	26	4½	79

The number of days mentioned for different varieties indicates the period from planting to marketable maturity. Naturally they cannot be the same for every section of the country and varying conditions of soil or temperature. They are, however, based on averages from the different Asgrow breeding and trial grounds and will serve as an approximate guide and enable comparison between varieties.

SPINACH

This necessary vegetable has been frozen more in the West than in the East, but in both sections satisfactory results have been achieved, particularly with the thick leaved sorts though all varieties may be successfully packed if care is taken in processing to avoid loss of firm texture. The days given are for comparison; they vary depending on time of sowing, etc.

Culture: For best results, spinach requires a large amount of humus in the soil. Sowings can be made in March and April for early summer harvest and in August and September for fall crop. Plant seed in rows 16 to 24 inches apart. 15 to 20 pounds of seed will sow an acre.

Days from sowing to cutting

BLIGHT RESISTANT SAVOY (VIRGINIA SAVOY) 39
A Savoy-leaved sort, bred at the Virginia Experiment Station for mosaic resistance. Upstanding, vigorous plants; seeding rather early; highly desirable for planting in infested soil. Leaves somewhat smoother than other strains of Savoy.

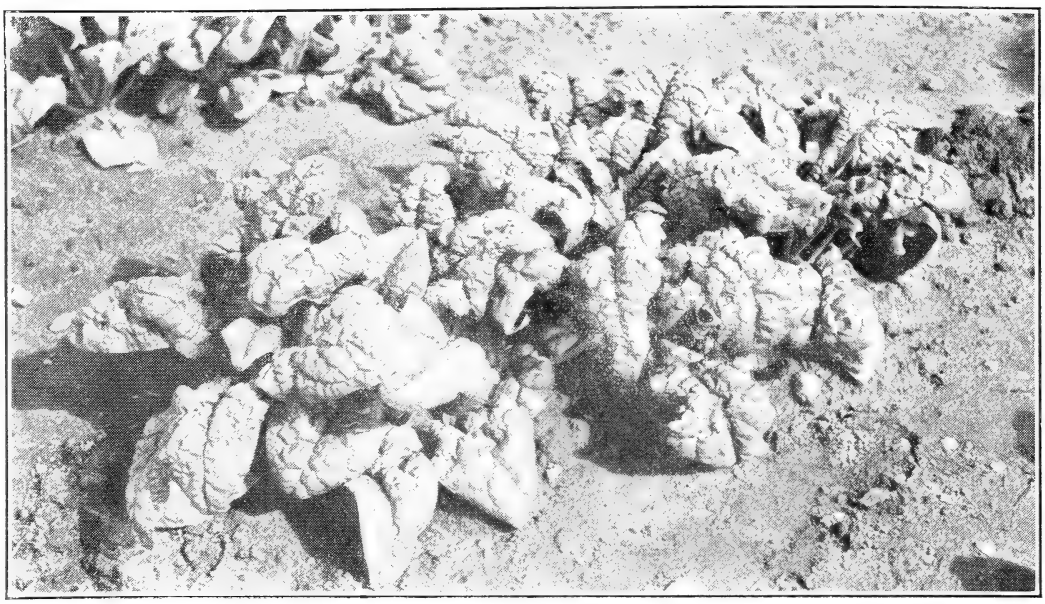
BLOOMSDALE SAVOY, LONG STANDING 42
Only a few days later than the regular Bloomsdale Savoy, it holds twelve to fourteen days longer before throwing seed stalks. Plant is very uniform and sturdy, with very attractive, highly crumpled and blistered dark green leaves.

GIANT NOBEL or GIANT THICK LEAVED 45
A recent European introduction of high merit. Plant large, vigorous, and spreading; slow to form seed stalks, and an extremely heavy yielder. Leaves very large, thick, smooth, pointed with rounded tip; deep green, tender. The best of the Thick Leaved sorts.

KING OF DENMARK 46
An exceptionally long standing sort. The large, spreading plants carry broad, rounded, very dark green leaves, which are somewhat crumpled. Excellent for spring planting, as seed stalks are slow in forming.

Giant Nobel, a very productive, thick-leaved, well-flavored sort

SPINACH—Continued



Bloomsdale Savoy, Long Standing. Very popular with commercial growers

Days from sowing to cutting

OLD DOMINION 40
Developed at the Virginia Agricultural Experiment Station. A cross between Virginia Blight Resistant Savoy and King of Denmark, resistant to mosaic and of long standing character. Plant similar to Savoy but leaves somewhat more pointed. Used mostly for fall planting for early spring harvest.

VIKING 45
This new variety may well be described as a dark green Nobel and is also known as Northland. Plant large, spreading, vigorous, long-standing and heavily productive. Leaves very large, thick, dark green.

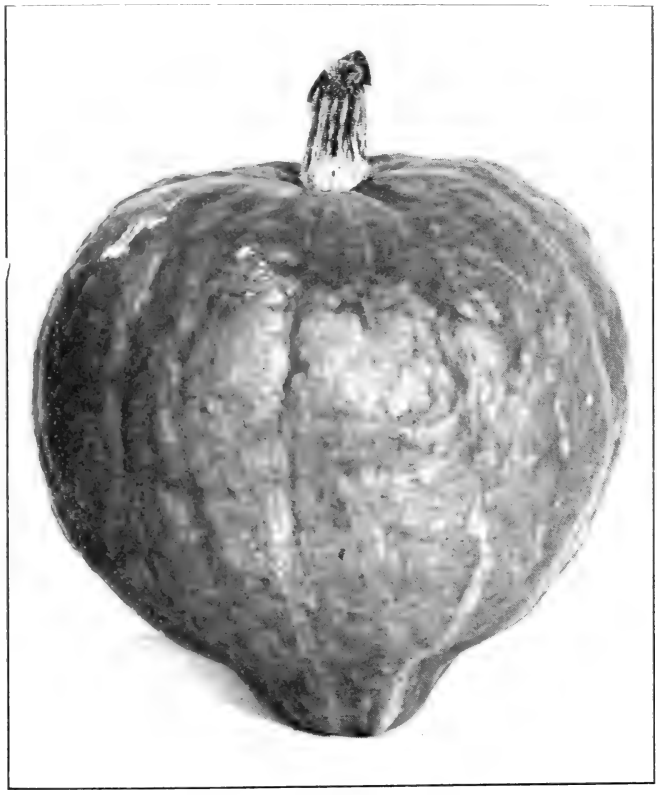
VIROFLAY 45
An extremely large mid-season, vigorous growing variety, with long, broad, pointed, thick, smooth leaves, of deep green color.

A farmer-grower's load arriving at one of our warehouses

SQUASH

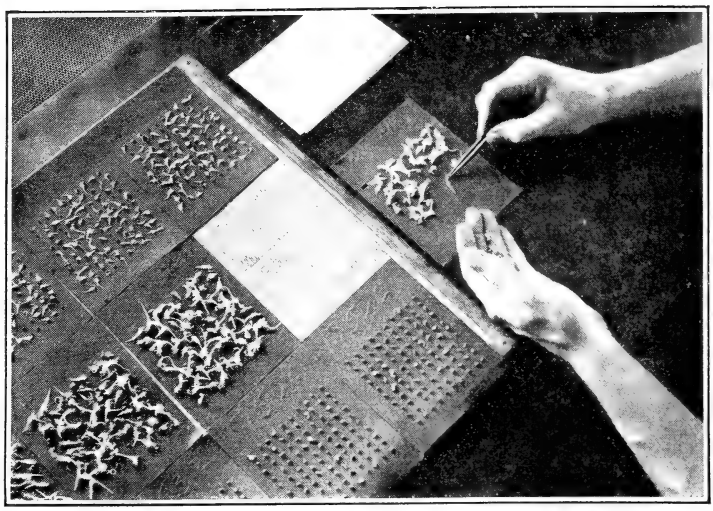
Squash has lent itself excellently to freezing, both color and taste being well preserved. Orange-skinned varieties are preferred, as in canning, because minute pieces of skin left after separator treatment are not noticeable.

Of all the vegetables, squashes exhibit the greatest range in plant and fruit characters and hybridize most readily under average field conditions. Consequently they are given special care and attention on our breeding grounds in Colorado, California and Connecticut. Pedigreed lines are established by covering flowers with bags to control pollination. Increase blocks are grown in fields well-isolated from any other squash variety. The number of days indicates the time from planting of seed to mature fruits. The measurements apply to fully grown fruits.



Golden Delicious Marrow. Has dry, sweet flesh

	Depth inches	Diameter inches	Days from planting to canning
BOSTON MARROW ..... A very productive, late fall variety. Resembling Hubbard in size and shape, the fruits weigh 6 to 8 pounds. The deep orange skin is somewhat rough, and quite hard; flesh is yellow, thick, firm, fine grained, moist. Vine of trailing type.	12	9	97
GOLDEN DELICIOUS MARROW ..... A highly desirable sort, on account of its extremely dry flesh. Vine of trailing type. Fruits top-shaped, weigh 7 pounds. Color bright reddish orange, with green tip at blossom end. Flesh thick, medium grained, golden orange, sweet and dry. Retains its fine qualities when frozen.	10 to 12	8	100
GOLDEN HUBBARD ..... Fruits somewhat pointed at each end, weigh 8 to 10 pounds, moderately warted, orange-red, with faint cream colored stripes toward blossom end; flesh deep orange, dry, and of fine quality; gives a superior product.	11	8	100



THE ASGROW BREEDING AND DEVELOPMENT PROGRAM

Listed on the inside page of the front cover are our Departments of Breeding where skilled plant-breeders carry on extensive and intensive work with three objectives: (1) the maintenance of Asgrow pedigreed parent stocks to prevent the otherwise inevitable reversion to earlier types of these highly developed strains, (2) the adaptation of these stocks to different growing conditions and the menace of disease and parasites, (3) the development of new and improved varieties. In all, upwards of 1000 acres are employed and the locations are those best adapted to secure purity of strain, vigor of growth and freedom from disease.

Evidence of what the Program has accomplished in the development of new varieties and disease-resistant strains may be seen in our catalogs and in the record of the All-America Trials sponsored in recent years by the American Seed Trade Association, where each year thus far new Asgrow varieties have achieved distinction.

As further experience is gained in the technical processes of the frozen pack it is almost inevitable that special requirements in vegetables will become apparent. To meet such requirements and other problems as they arise, the facilities of our Research Department, Greenhouses and Breeding Grounds will continually be at work.

A 250-acre field of Asgrow pure-line progenies.

PLANTING TABLE

Species	Seed required for 50 ft. of row	Seed required to sow an acre	Seed to produce a given number of plants	Distance between rows inches	Distance apart in row inches	Depth of planting inches
Artichoke, Globe	¼ oz.	6 to 8 oz.	1 oz. to 500	40 to 48	18 to 24	1
Asparagus	½ oz.	4 lbs.	1 oz. to 700	24 to 30	3 to 6	1 to 2
Beans, Bush	½ lb.	50 to 60 lbs.		24 to 30	2 to 3	1½ to 2
Beans, Lima	½ lb.	30 to 50 lbs.		24 to 36	3 to 6	1½ to 2
Beans, Pole	½ lb.	30 to 35 lbs.		36 to 48	6 to 8	1½ to 2
Beet	½ oz.	8 to 14 lbs.		14 to 24	3 to 4	½ to 1
Beet, Mangel and Sugar	½ oz.	6 to 10 lbs.		18 to 24	6 to 9	½ to 1
Swiss Chard	½ oz.	6 to 10 oz.		18 to 24	10 to 12	1
Broccoli	¼ oz.	4 oz.	1 oz. to 3000	30 to 40	16 to 22	½ to 1
Brussels Sprouts	¼ oz.	4 oz.	1 oz. to 3000	20 to 36	16 to 22	½ to ¾
Cabbage	¼ oz.	4 oz.	1 oz. to 3000	18 to 36	14 to 24	½
Cardoon	½ oz.	5 oz.		20 to 32	20 to 30	½ to 1
Carrot	¼ oz.	3 to 4 lbs.		16 to 24	1 to 3	½
Cauliflower	¼ oz.	4 oz.	1 oz. to 4000	24 to 36	20 to 24	½
Celery	⅛ oz.	4 oz.	1 oz. to 8000	24 to 40	4 to 6	¼
Chicory	½ oz.	4 to 5 lbs.		20 to 36	2 to 3	½ to 1
Collard	¼ oz.	5 oz.	1 oz. to 4000	24 to 30	14 to 18	½
Corn, Pop	3 oz.	6 to 8 lbs.		34 to 40	6 to 8	1
Corn, Sweet	4 oz.	10 to 14 lbs.		30 to 42	9 to 12	1
Corn Salad	2 oz.	10 to 12 lbs.		14 to 18	3 to 4	¾
Cress	1 oz.	10 lbs.		12 to 18	2 to 4	¼
Cucumber	½ oz.	3 to 4 lbs.		48 to 60	12 to 36	½ to ¾
Dandelion	¼ oz.	5 to 6 lbs.		18 to 22	6 to 10	½
Dill	½ oz.	5 lbs.		20 to 36	4 to 6	½
Egg Plant	⅛ oz.	5 to 6 oz.	1 oz. to 2000	24 to 36	18 to 24	½
Endive	½ oz.	4 to 5 lbs.		18 to 24	8 to 12	½
Fennel	½ oz.	3 to 4 lbs.		24 to 32	5 to 8	¾
Kale	½ oz.	4 to 5 lbs.	1 oz. to 4000	24 to 32	14 to 22	½
Kohl Rabi	¼ oz.	4 to 5 lbs.		14 to 24	4 to 6	½
Leek	¼ oz.	4 lbs.		14 to 36	2 to 3	¾
Lettuce	¼ oz.	3 lbs.		12 to 18	4 to 12	¼
Melon, Musk	½ oz.	3 to 4 lbs.		70 to 80	36 to 60	¾
Melon, Water	½ oz.	3 to 4 lbs.		72 to 96	72 to 96	¾
Mustard	¼ oz.	4 lbs.		14 to 24	6 to 9	½
Okra	1 oz.	8 to 10 lbs.		24 to 40	18 to 24	1
Onion	¼ oz.	3 to 4 lbs.		18 to 24	3 to 4	¾
Onion (for sets)		60 to 85 lbs.		12 to 14	Not thinned	¾
Parsnip	½ oz.	4 to 6 lbs.		18 to 24	3 to 4	½
Parsley	¼ oz.	4 to 6 lbs.		12 to 20	6 to 8	½
Peas	¾ lb.	90 to 180 lbs.		24 to 36	1 to 2	1 to 2
Pepper	⅛ oz.	1 to 2 lbs.	1 oz. to 1000	20 to 30	18 to 20	½
Pumpkin	2 oz.	3 to 4 lbs.		96 to 110	60 to 84	¾
Radish	½ oz.	10 to 12 lbs.		12 to 18	1 to 2	½
Rhubarb	½ oz.	3 lbs.		24 to 42	20 to 24	¾
Rutabaga	½ oz.	2 to 4 lbs.		18 to 24	4 to 7	½
Sage	½ oz.	4 to 5 lbs.		20 to 24	6 to 10	½
Salsify	¾ oz.	7 to 8 lbs.		18 to 24	2 to 3	¾
Sorrel	½ oz.	4 to 5 lbs.		12 to 22	2 to 3	½
Spinach	¾ oz.	15 to 20 lbs.		16 to 24	5 to 6	¾
Squash, Bush	1 oz.	4 to 6 lbs.		42 to 48	42 to 48	1
Squash, Vining	1 oz.	4 lbs.		72 to 90	60 to 90	1
Sunflower	1 oz.	7 to 8 lbs.		48 to 70	10 to 12	1
Tomato		2 oz.	1 oz. to 4000	40 to 60	36 to 40	½
Tobacco		2 oz.	1 oz. to 4500	36 to 48	24 to 36	½
Turnip	½ oz.	2 to 3 lbs.		12 to 20	2 to 4	½


Asgrow