Crop listings: asparagus, bean—dry, bean—green, beet, broccoli, Brussels sprouts, cabbage, carrot, cauliflower, celery, chickpea, collard, cucumber, cucumber—Armenian, daikon, eggplant, endive, gourd—benincasa, gourd—cucurbita, gourd—lagenaria, gourd—luffa ridge, gourd—luffa sponge, gourd—momordica, gourd—sechium, herbs—parsley, kale, leek, lettuce

This list of the North American vegetable cultivars was developed using the database of cultivars registered with the American Seed Trade Association, as well as published descriptions from scientific journals and seed catalogs. Assistant editors responsible for each crop were instructed to obtain as much information as possible about the cultivars available to North American growers. The crop species are listed alphabetically, with cultivars listed alphabetically within each of those.

The information about each cultivar is presented in a standard format that includes the cultivar name, experimental designation, breeder, vendor, parents, plant characteristics, disease and other resistances, similar cultivars, areas of adaptation, plant variety protection information, and year of release. In many cases, complete information was not available for the cultivars included in the list. Cultivars listed here were generally released since 1988, when the last vegetable cultivar list was assembled by Tigchelaar (22).

Previous vegetable cultivar lists have been published (1–22) in this journal, and its predecessor.


ASPARAGUS

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Brock Imperial 84.—Breeder and vendor: ARCO. 1984.

BEAN—DRY

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AC Calmont (HR41-923).—Orig. by Agr. and Agri-Food Canada Research Centre, Harrow, Ontario, Canada. Parentage: California Light Red Kidney x Montcalm. Characteristics: determinate short bush growth habit, medium to full maturity, dark red kidney, shiny lustrous seed, resistant to BCMV (1 and NY15 strains) and to alpha and delta and alpha Brazil races of anthracnose. 1996.


AC Elk (HR48-1290).—Orig. by Agr. and Agri-Food Canada Research Centre, Harrow, Ontario, Canada. Parentage: Mecosta x MRK44. Characteristics: light red kidney with shiny seed coat, bush
determinate growth type, early maturity, resistant to BCMV race 1 and to alpha and alpha Brazil races of anthracnose. 1996.


**AC Oak (HR50-1607).—**Orig. by Agr. and Agri-Food Canada Research Centre, Harrow, Ontario, Canada. Parentage: Sierra x Fiesta. Characteristics: pinto bean seed, indeterminate erect growth habit with short vine, medium maturity, acceptable cooking quality, and resistant to BCMV 1 and NY15 strains. 1996.

**Admiral.**—Orig. by Idaho Seed Bean Co., Twin Falls. Characteristics: navy bean, type I bush plant habit, intermediate maturity, resistant to rust halo blight, BCMV (1 and NY15 strains), and curly top virus. 1981.


**Albion (XPB166).—**Orig. by Asgrow Seed Co. Characteristics: early navy bean with good yield and high quality, resistant to BCMV. 1987.


**Artic.**—Orig. by C. Muehlfeld, Bridgeport, Mich. Characteristics: navy bean, bush plant habit, early, resistant to BCMV (strain 1) and halo blight. 1981.

**Auburn (D83360).—**Orig. by Rogers Seed Co., Nampa, Idaho. Characteristics: light red kidney seed, type Ia growth habit, early maturity, broad adaptation, good canning quality, resistant to BCMV (I gene) and rust. 1992.


**Avanti (XP-B229).—**Orig. by Seminis Vegetable Seeds. Parentage: C20/Seafarer. Characteristics: navy bean, indeterminate bush, good canning quality, resistant to BCMV (I gene), moderate resistance to white mold and moderate tolerance to air pollution. 1990.


Chorro (527-1BK-1BK).—Orig. by USDA and Agr. Expt. Sta., Univ. of Puerto Rico. Parentage: recurrent selection utilizing a hybrid plant as one of source of traits in PI 207198 (Colombia). Characteristics: pinto, medium-sized seed, high yielding with vigorous vine habit, extensive root system, resistant to soilborne diseases, BCMV, rust, and moderately resistant to angular leaf spot. 1979.

Cinnabar (D81125).—Orig. by Rogers Seed Co., Nampa, Idaho. Characteristics: pinto bean, type IIb, intermediate maturity, resistant to BCMV. 1993.


Focus (XP-B309).—Orig. by Asgrow Seed Co. Characteristics: pinto bean, upright plant type, high pod set, resistant to BCMV. 1994.

Foxfire (RNK702).—Orig. by Rogers Seed Co., Nampa, Idaho. Characteristics: light red kidney, upright type Ia bush habit, early maturity, broad adaptation, resistant to BCMV (I gene) and rust, moderately tolerant to halo blight and brown spot. 1992.

Gala.—Orig. by Idaho Seed Bean Co., Twin Falls. Characteristics: pinto bean, type III growth habit, moderately early, resistant to BCMV (1 and NY15 strains), curly top virus and halo blight. 1981.


Harofleet (Fleetwood Are).—Orig. by Agr. Canada Research Sta., Harrow, and Crop Science Dept., Univ. of Guelph. Parentage: Fleetwood 6*/PI326418/Fleetwood. Characteristics: navy bean, bush plant habit, very white glossy seed coat, resistant to BCMV (1 and NY15 strains) and anthracnose (Are gene). 1983.

Harokent (Kentonwood 83).—Orig. by Agr. Canada Research Sta., Harrow, Canada, and Crop Science Dept., Univ. of Guelph, Canada. Parentage: Kentwood 6*/PI326418/Kentonwood. Characteristics: navy bean, bush plant type, same maturity and seed as Kentwood, resistant to BCMV (1 and NY15 strains) and anthracnose (Are gene). 1983.


Horizon (XPB212).—Orig. by Asgrow Seed Co. Characteristics: Type I growth habit, very early light red kidney bean with excellent bean quality, resistant to BCMV. 1990.

Huron (N90563).—Orig. by Michigan Agr. Expt. Sta. and USDA–


ISB 462.—Orig. by Idaho Seed Bean Co., Twin Falls. Characteristics: pink bean, type III growth habit, early maturity, resistant to BCMV (type and NY15 strains) and curly top virus. 1989.


Lark (XPB178).—Orig. by Asgrow Seed Co. Characteristics: uniform light-red kidney with attractive bean shape, straight across the hilum, type I growth habit, resistant to BCMV. 1987.


Midnight.—Orig. by The New York State College of Agr. and Life Sciences, Cornell Univ., Ithaca, N.Y. Parentage: composite of 3 NY lines 70001, 70002, and 70003 from single plant selections made in 25 germplasm lines (CIAT, Cali, Colombia, SA). Characteristics: black seed, upright type IIa growth habit, large basal root system, resistant to lodging, resistant to BCMV, and moderately resistant to Fusarium solani root rot and Pythium ultimum damping-off diseases, and has some plant avoidance of white mold. Adaptation: widely adapted in U.S. 1980.


OAC Gryphon (OAC 82-2).—Orig. by Dept. of Crop Science, Univ. of Guelph, Guelph, Ontario, Canada. Parentage: Ex Rico 5/Ex Rico 23/Narda. Characteristics: navy bean seed, indeterminate, semi-vine plant habit, medium maturity, resistant to alpha, beta, gamma, and delta races of bean anthracnose, resistant to BCMV 1 and NY15 strains. 1988.


OAC Spring (OAC 85-1).—Orig. by Dept. of Crop Science, Univ. of Guelph, Guelph, Ontario, Canada. Parentage: Seafarer/5/Seafarer/Narda. Characteristics: navy bean, determinate bush-type plant habit, average maturity, resistant to anthracnose and BCMV type and NY15 strains. 1988.


Palmarejo (70-R-31).—Orig. by USDA and Agr. Expt. Sta., Univ. of Puerto Rico. Parentage: origin, PI 207139 (Colombia). Characteristics: bush bean of medium height, stem resistant to lodging, good yield under lowland tropical conditions, pink mottled seed color, highly resistant to rust races endemic to Puerto Rico, and resistant to BCMV. 1976.


Pilgrim (PVD865).—Orig. by Wilbur Ellis Seed Div., Spokane, Wash. Characteristics: early, type I bush, long burghundy splashed pods, very high yield capabilities, very concentrated bloom and pod set, seeds kidney shaped, similar color to cranberry, outstanding root system, resistant to BCMV (1, NY15), curly top, bean root rots. 1982.


Prairie (ROG523).—Orig. by Rogers Seed Co., Nampa, Idaho. Characteristics: Great Northern bean, type IIIb growth habit, moderately late, resistant to BCMV. 1996.


RNK354 (RKN354).—Orig. by Rogers Sandoz Seeds, Nampa, Idaho. Characteristics: pinto bean seed; good seed size, shape, and color; vigorous type IIb plant habit; moderately late maturity; resistant to BCMV. 1994.

Rocket (XPB185).—Orig. by Asgrow Seed Co. Characteristics: midseason navy bean, resistant to BCMV. 1987.

Roza (GR-18).—Orig. by USDA–ARS and Washington State Univ. Parentage: Sutter Pink/virus-resistant red-seeded bush-breeding line
Steuben Yellow Eye (64-23).—Orig. by Cornell Univ. College of Agr., Dept. of Vegetable Crops, Ithaca, N.Y. Parentage: selection from standard variety Yellow Eye. Characteristics: Yellow Eye, seed slightly larger and more uniform, higher yielding than original Yellow Eye. 1961.

Stinger (XPB155).—Orig. by Asgrow Seed Co. Characteristics: high-yielding navy bean, good seed quality, late maturity, resistant to BCMV (I gene). 1986.


Sutter.—Orig. by Univ. of California, Davis. Parentage: standard Pink/Early Pink. Characteristics: pink bean, type III growth habit, moderately early, resistant to curly top virus. 1943.


T 39.—Orig. by Univ. of California, Davis. Characteristics: black bean, type III growth habit, late maturity, resistant to BCMV (1 and NY15 strains) and rust. 1975.


Tuscola (8467).—Orig. by Michigan Agr. Exp. Sta. and USDA-ARS. Parentage: derived from a fourth intercross generation of 10×10 diallel cross of navy beans. Characteristics: navy bean, vigorous bush habit, more erect than Sanilac, seed coat more resistant to mechanical damage than standard varieties, resistant to alpha and beta races of anthracnose, resistant to BCMV (type and NY15 strains). 1977.


UI 158 (K0158).—Orig. by Univ. of Idaho Agr. Expt. Sta. Parentage: Aurora/UI 76. Characteristics: navy bean with slightly oatey and flat seed, type II plant habit, good cooking quality, resistant to curly top and BCMV (I gene) and tolerant to bacterial disease. 1985.


UI 228.—Orig. by Univ. of Idaho Agr. Expt. Sta. Characteristics: small red, type III, intermediate maturity, resistant to BCMV (type and NY15 strains) and curly top virus. 1993.

UI 239.—Orig. by Univ. of Idaho Agr. Expt. Sta. Characteristics: small red, type III growth habit, intermediate maturity, resistant to BCMV (type and NY15 strains) and curly top virus. 1993.


Yolano.—Orig. by Univ. of California, Davis. Characteristics: pink bean, type III growth habit, moderate early maturity, resistant to BCMV (type I and NY15 strains) and curly top virus. 1989.

**BEAN—GREEN**

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Anchor (XPB228).—Breeder: Asgrow. Vendor: Asgrow. Charac-
Calgreen (GP81381-2-8).—Breeder: Dr. J. Morris. Vendor: Rogers. Characteristics: Calgreen is a narrow flat, green-podded snap bean variety that is similar to the variety Greengenes, but Calgreen has a more erect bush which holds the pods high; pods are darker green and are straight and uniform. Resistance: bean virus 1, New York 15. Similar: Greengenes. PVP. 1990.


Colt (GP79-140).—Breeder: Dr. J. Morris. Vendor: Rogers. Characteristics: ≈58 days to fresh maturity; 5.25” pod length and averages three to four sieve; has medium dark and bright green pod color, with round, straight, smooth pods. Resistance: bean common mosaic virus. Similar: Slenderette. 1987.


Flatbush (FM142).—Breeder: Dr. G.C. Emery. Vendor: Ferry-
Morse. Characteristics: flat-podded green crop type with heavy concentrated yields; pods are straight, smooth, uniform, medium green, white seeded. Resistance: bean virus 1A. Similar: Grecrop. PVP. 1988.


**Minigreen (GP760108).**—Breeder: Dr. J. Morris. Vendor: Rogers. Characteristics: 58 days fresh maturity, 4.5” pod length and average three sieve, has dark green pod color with dark green internal pod flesh; pods are round and straight. Resistance: bean common mosaic virus. Similar: Dandy. 1987.


Romano 635 (635-1-13).—Breeder: D. P. Moser. Vendor: Rogers. Characteristics: Bush Romano 635 is a 59-day, home garden type Romano; pods are 14-16 cm in length and have a medium green color that is persistent through maturation; pod flavor is typical of Oregon Blue Lake types. Resistance: bean virus 1, New York 15, curly top. Similar: Roma. PVP. 1989.


Shamrock (CP79151).—Breeder: D. J. Morris. Vendor: Rogers. Characteristics: Shamrock has an erect, open bush with slender pods that are 5.5-6” long, has a unique bright green color and is round and straight. Resistance: bean common mosaic virus, bean virus 1, New York 15. Similar: Slenderette. 1983.

Shore (FM208).—Breeder: D. G. Emery. Vendor: Ferry-Morse. Characteristics: white seeded bush type with excellent yield potential; attractive straight, smooth, uniform pods; can be used for fresh market or processing. Resistance: bean virus 1, bean virus 1A. Similar: Rebel. PVP. 1988.


Wrangler (XPB203).—Breeder: Asgrow. Vendor: Asgrow. Characteristics: high yielding shipping, fresh market, bean with colored
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Avenger.—Breeder: Harris Moran. Characteristics: F₁ hybrid, flattened globe shape, tall, full, glossy green tops, developed for the bunching and greens markets, developed from germplasm from the Univ. of Wisconsin beet breeding program.

Big Red.—Breeder: W.H. Gabelman, Univ. of Wisconsin, Madison. Characteristics: F₁ hybrid, round shape, dark red interior, high sugar content, bright green glossy leaf, sweet flavor, multipurpose beet, high yield potential.

Bikores.—Breeder: Bejo. Characteristics: round shape, dark red interior, strong tops, bolt resistant.


Chiojgia.—Characteristics: flattened globe shape, medium green leaf, zoned purple and white bullseye appearance, novelty color. Resistance: high tolerance to bolting.


Detroit Short Top.—Characteristics: globe, purple interior, medium dark green glossy leaf, strong tops. Resistance: moderate tolerance to downy mildew, moderate bolting tolerance.


Early Wonder Tall Top.—Characteristics: flat globe, medium red interior, medium green slightly glossy leaf, durable tops, low bolting tolerance.

Fornos.—Characteristics: cylindrical root, excellent dark red interior, processing beet.


Kestrel.—Breeder: Alf Christianson. Characteristics: F₁ hybrid, globe shape, dark red interior, high sugar content, bright green medium glossy foliage, high yield potential. Resistance: tolerance to cercospora, moderate tolerance to powdery mildew, downy mildew, rhizoctonia.

Lutz Green Leaf.—Characteristics: top shape, purple interior, light green glossy leaf, excellent storage potential. Resistance: high tolerance to bolting, tolerance to cercospora, moderate tolerance to downy mildew, tolerance to powdery mildew.

Monopoly.—Characteristics: globe shape, monogerm, good storage potential.


Peco.—Breeder: Vilmorin. Characteristics: globe shape, deep red interior, strong top.

Red Ball.—Characteristics: globe shape, dark red interior, intended for baby beet production, tender greens, small tap root.

Red Russian.—Breeder: Burpee. Characteristics: purple-red roots; elongated; extra sweet.


Rosette (XPH3646).—Breeder and vendor: Asgrow. Characteristics: hybrid beet with small crown attachment, excellent internal color with very little zoning, medium size top with dark green color, for both fresh market and processing. Similar: Detroit Dark Red. 1992.


Scarlet Supreme.—Breeder: Seminis Vegetable Seeds. Characteristics: F₁ hybrid, round shape, blood red interior, excellent for processing, little zoning, holds shape well under crowded conditions.

Solo.—Breeder: Alf Christianson. Characteristics: F₁ hybrid, monogerm, globe to top shape, dark red interior, dark green glossy leaf, early maturity. Resistance: tolerance to cercospora, moderate tolerance to downy mildew, powdery mildew, tolerance to rhizoctonia.

BROCCOLI
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Hercules (HMX4138).—Breeder and vendor: Harris Moran. Characteristics: medium-late broccoli, large smooth blue-green heads, large stalk size, medium to small bead size, very smooth, semi-dome head structure. Similar: Citation. 1991.

High Sierra (XPH5562).—Breeder: Takii. Vendor: Asgrow. Characteristics: high, round, domed head with a medium stalk, bead size is small and uniform, color is blue-green, can be used for fresh or frozen product; late-season maturity. Similar: Shogun, Green Valiant. 1988.


Legacy (XPH5914).—Breeder and vendor: Asgrow. Characteristics: targeted for wide geographical adaptation including overwintering production, plant height is normally 40–50 cm with head size of 10–15 cm, bead size is small to medium, stems are clean, heads high domed. Similar: Shogun. 1992.


Marathon.—Breeder and vendor: Sakata. Characteristics: over-winters, cold tolerant cultivar, good uniformity, high yield, small beads, large dome head, heavy stalks, good for fresh, freezer, and crown cut markets. 1985.


Sabre (XPH5774).—Breeder and vendor: Asgrow. Characteristics: main season maturity, tall plant, 35–45 cm, dark green color with clean stem, good head exsertion, heads are well domed and smooth, beads are small to medium and uniform, good holding ability. Similar: Premium Crop. 1992.


Scorpio (XPH 5166).—Breeder and vendor: Asgrow. Characteristics: early maturity, large-domed heads with good solidity and weight, buds are medium-fine and blue-green in color, the stem is heavy, the head extends well for easy harvest. Similar: Baccus. 1985.


Symphony (XPH 5004).—Breeder and vendor: Asgrow. Characteristics: plants are small, but vigorous, both leaves and head are medium dark green, heads are solid, well domed with heavy stems, bead size is medium to large. Similar: Embassy. 1988.


**BRUSSELS SPROUTS**

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Acropolis.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, early maturity, round dark green sprouts, easy to pick.


Agi Lancelot.—See Lancelot.


Alpine.—Breeder and vendor: Elsoms. Characteristics: F₁ hybrid, late maturity, small to medium oval sprouts, mildew resistant.


Amfortas.—Breeder and vendor: Sluis and Groot. Characteristics: F₁ hybrid, midseason to late maturity, tall plants.


Anagor.—Vendor: Clause. Characteristics: open-pollinated cultivar, midseason to late maturity, round sprouts.


Bedford-Darkmar 21.—Characteristics: open-pollinated cultivar, midseason to late maturity, medium-large dark green sprouts.


Cambridge.—Vendor: Booker.


Cascade.—Characteristics: F₁ hybrid.

Catskill Improved.—Characteristics: open-pollinated cultivar, early maturity, compact plants. Similar: Long Island Improved.


Concorde.—Characteristics: F₁ hybrid.


Cordeia.—Breeder and vendor: Bejo Zaden. Characteristics: F₁ hybrid, midseason maturity, medium to tall, dark green round solid sprouts, long holding period.


Craton.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, very early maturity, smooth large sprouts.


Crystal.—Breeder and vendor: Takii. Characteristics: F₁ hybrid, midseason to late maturity, easy to defoliate.


Dasher.—Characteristics: F₁ hybrid.

Davenport.—Breeder and vendor: Keystone. Characteristics: 3-way hybrid, early maturity, some variability for plant height.


Diego.—Characteristics: F₁ hybrid.


Early Dutch Improved.—Characteristics: open-pollinated cultivar.

Early Green.—Breeder and vendor: Kobayashi. Characteristics: \( F_1 \) hybrid, very early to early maturity, compact plant.

Edmund.—Vendor: Sluis and Groot. Characteristics: \( F_1 \) hybrid, medium dark green elongated sprouts.

Emerald.—Breeder and vendor: Takii. Characteristics: \( F_1 \) hybrid, early to midseason maturity, dark green wingless sprouts, easy to defoliate.

Estate.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, very late maturity, frost tolerant, mechanical harvest only.

Evident.—Vendor: Nickerson Zwaan. Characteristics: \( F_1 \) hybrid.

Excelline.—Vendor: Huizer. Characteristics: \( F_1 \) hybrid.

Explorer.—Vendor: Bejo Zaden. Characteristics: \( F_1 \) hybrid.

Extent.—Vendor: Nickerson Zwaan. Characteristics: \( F_1 \) hybrid.

Fasolt.—Characteristics: \( F_1 \) hybrid, very late maturity, very dark green sprouts.

Fermesse.—Vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid.

Focus.—Vendor: Daehnfeldt. Characteristics: \( F_1 \) hybrid.

Fortress.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, very late maturity, tall plants, round dark green sprouts.

Frigo.—Breeder and vendor: Royal Sluis. Characteristics: open-pollinated cultivar, midseason to late maturity, medium tall to tall plant, medium-sized round-oval sprouts.

Frigomax (WM5).—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, early maturity, dark green sprouts.

Frigostar.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, early to midseason maturity.

Frigosun.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, early to midseason maturity, round fresh-green sprouts.

Frigotop.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, early to midseason maturity, round fresh green sprouts, leaves drop easily.

Frontline.—Vendor: Huizer. Characteristics: \( F_1 \) hybrid.

Gabion.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, midseason to late maturity, small to medium oval-round dark green sprouts.

Garnet.—Breeder and vendor: Takii. Characteristics: \( F_1 \) hybrid, early to midseason maturity, smooth round-oval medium green sprouts.

Garrison.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, late to very late maturity, slightly oval almost wingless sprouts.

Gavin.—Vendor: Sluis and Groot. Characteristics: \( F_1 \) hybrid.


Glenora.—Breeder: Elsoms. Vendor: Elsoms. Characteristics: \( F_1 \) hybrid, late to very late maturity, small to medium oval sprouts, easy to defoliate, mildew resistant.

Goldmine.—Breeder and vendor: Bejo Zaden. Characteristics: \( F_1 \) hybrid, very early maturity, medium tall, bright green round sprouts.

Golfer.—Vendor: Bejo Zaden. Characteristics: \( F_1 \) hybrid.

Gravendeel.—Characteristics: open-pollinated cultivar, dark green medium-sized sprouts, good holding ability.


Green Marvel.—Breeder and vendor: Sakata. Characteristics: \( F_1 \) hybrid, very early maturity.

Groenboom.—Characteristics: open-pollinated cultivar, very late maturity, winter hardy, medium dark green elongated sprouts.

Gronaldo.—Breeder and vendor: Royal Sluis. Characteristics: open-pollinated cultivar, late maturity, small dark green sprouts, frost resistant.


Harald 51.—Characteristics: open-pollinated cultivar.

Heracles.—Characteristics: \( F_1 \) hybrid.


Hossa.—Vendor: Sperling.

Huizers Late.—Breeder and vendor: Huizer. Characteristics: open-pollinated cultivar.

Hunter.—Vendor: Bejo Zaden. Characteristics: \( F_1 \) hybrid.


Igor.—Breeder and vendor: Nunhems Zaden. Characteristics: \( F_1 \) hybrid, midseason to late maturity, strong plant type, vigorous growth, very uniform cylindrical sprouts, medium green. 1991.

Ilias.—Vendor: Sluis and Groot. Characteristics: \( F_1 \) hybrid.

Indiana.—Vendor: Clause. Characteristics: \( F_1 \) hybrid.


Jackeline.—Vendor: Sperli. Characteristics: \( F_1 \) hybrid.


Jade Cross H.—Breeder and vendor: Takii. Characteristics: \( F_1 \) hybrid, midseason to late maturity, tall plants, dark green oval sprouts.

Resistance: tolerance to Botrytis.

Jasper.—Breeder and vendor: Takii. Characteristics: \( F_1 \) hybrid, midseason to late maturity, tall plants, bright green oval sprouts.

Jubilee.—Vendor: Nickerson Zwaan. Characteristics: \( F_1 \) hybrid.

Karimu.—Vendor: Nickerson Zwaan. Characteristics: \( F_1 \) hybrid.

King Arthur.—Characteristics: \( F_1 \) hybrid, midseason to late maturity, tall vigorous plants, frost resistance, large sprouts.

Kundry.—Breeder and vendor: Sluis and Groot. Characteristics: \( F_1 \) hybrid, early to midseason maturity, compact plants, round very dark green sprouts.

Ladora.—Characteristics: \( F_1 \) hybrid, midseason to late maturity, round medium green sprouts.

Lady Anne.—Vendor: Bejo Zaden. Characteristics: \( F_1 \) hybrid.

Lancelot.—Characteristics: \( F_1 \) hybrid, early to midseason maturity, medium tall plants.

Largendo.—Vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid.

Lauris.—Breeder and vendor: Sluis and Groot. Characteristics: \( F_1 \) hybrid, late maturity, tall plants, needs no topping.


Long Island Improved.—Characteristics: open-pollinated cultivar, early to midseason, compact plants.

Lunet (69777).—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, midseason to late maturity, tall plants, small to medium round-oval very smooth sprouts.

Marcoline.—Vendor: Huizer. Characteristics: \( F_1 \) hybrid.

Masterline.—Vendor: Sperli. Characteristics: \( F_1 \) hybrid.

Medium Dutch Improved.—Characteristics: open-pollinated cultivar, early to midseason maturity, compact plants.

Medium Early-Green.—Breeder and vendor: Kobayashi. Characteristics: \( F_1 \) hybrid, early, easy to pick.

Merkator.—Vendor: Chrestensen. Characteristics: \( F_1 \) hybrid.

Merlon.—Breeder and vendor: Royal Sluis. Characteristics: \( F_1 \) hybrid, early to midseason maturity, medium oval round dark green sprouts.


Montgomery.—Vendor: Tozer. Characteristics: \( F_1 \) hybrid.

Nebraska.—Breeder: Clause. Vendor: Clause. Characteristics: \( F_1 \) hybrid, late maturity, winter hardy, dark green round-oval sprouts.

Nicoline.—Vendor: Sperli. Characteristics: \( F_1 \) hybrid.

Odense Torve.—Vendor: Daehnfeldt.

Odessa.—Breeder and vendor: Clause. Characteristics: \( F_1 \) hybrid, early to midseason maturity, dark green round sprouts, good holding ability.

Odette.—Vendor: Nickerson Zwaan. Characteristics: \( F_1 \) hybrid.

Odran (NUN5123).—Breeder and vendor: Nunhems Zaden. Characteristics: \( F_1 \) hybrid, early to midseason maturity, very strong plant, uniform, cylindrical sprout setting, dark green round sprouts. 1990.

Oliver (SG667).—Breeder and vendor: Sluis and Groot. Characteristics: \( F_1 \) hybrid, early maturity, medium to large round-oval dark green sprouts.


Palisade.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, midseason to late maturity.


Parsifal.—Characteristics: F₁ hybrid, very early maturity, round-oval large sprouts.


Pearl.—Breeder and vendor: Takii. Characteristics: F₁ hybrid, midseason to late maturity, tall plants.


Perrine.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, very early maturity.


Puitar.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, early maturity, good freezer quality.

Porter.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, midseason maturity, smooth round sprouts, easy to pick.

Predora.—Breeder and vendor: Bejo Zaden. Characteristics: F₁ hybrid, early to midseason maturity, medium tall, short petioles, round sprouts, easy to defoliate.


Prince Askold.—Characteristics: F₁ hybrid, late maturity, winter hardy, very dark green sprouts.

Prince Marvel.—Breeder and vendor: Sakata. Characteristics: F₁ hybrid, very early maturity, small to medium round-oval round sprouts, suitable for machine harvesting.

Promesse.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, midseason maturity, round-oval dark green sprouts.


Queen Marvel.—Breeder and vendor: Sakata. Characteristics: F₁ hybrid, late maturity, round-oval sprouts.


Rampart.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, midseason to late maturity, tall plants, round pear-shaped dark green sprouts.


Rasmunda.—Breeder and vendor: Sluis and Groot. Characteristics: F₁ hybrid, late to very late maturity, winter hardy, round-medium sprouts.


Rido.—Characteristics: open-pollinated cultivar, late to very late maturity, dark green round sprouts.


Ronald.—Breeder and vendor: Nunhems. Characteristics: F₁ hybrid, midseason to late maturity, very strong plant type, sprouts medium green, oval to round shape. 1990.


Rovoka.—Breeder and vendor: Bejo Zaden. Characteristics: F₁ hybrid, midseason maturity, medium tall, slightly blistered foliage, bright green oval sprouts, easy to defoliate and pick.


Rubine.—Characteristics: open-pollinated cultivar, midseason to late maturity, red-purple sprouts.


Sanda.—Characteristics: open-pollinated cultivar, small to medium round sprouts, widely used by freezers. 1953.


Sigmund.—Characteristics: F₁ hybrid, late to very late maturity, winter hardy, good holding quality.


Stiekena 1.—Characteristics: open-pollinated cultivar, early to midseason maturity.

Stockade.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, very late maturity.

Sultan.—Characteristics: F₁ hybrid.


Taiga.—Breeder and vendor: Clause. Characteristics: F₁ hybrid, midseason to late maturity, dark green oval sprouts.


Topaz.—Breeder and vendor: Elsoms. Characteristics: F₁ hybrid, midseason to late maturity, medium oval dark green sprouts, easy to defoliate, good holding ability.

Topgrade.—Breeder and vendor: Royal Sluis. Characteristics: F₁ hybrid, midseason to late maturity, round dark green sprouts.


Tornado.—Breeder and vendor: Elsoms. Characteristics: F₁ hybrid, midseason maturity, medium round-oval dark green sprouts, easy to defoliate, mildew resistant.


**CABBAGE**

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**Coronet.**—Breeder: Chriseed. Characteristics: hybrid, late, blue-green, medium head, medium-high dry matter, very good flavor, excellent storability. Resistance: yellows, tolerance to tipburn, thrips.


**Falcon.**—Breeder: Reed. Vendor: Petoseed. Characteristics: hybrid, large frame, high yielding, very late, good holding, dry matter...
high. Resistance: yellows; tolerance to tipburn, black rot, thrips.


Fortuna.—Breeder: Reed. Vendor: Petseed. Characteristics: hybrid, uniform, good wrappers, vigorous, holds well, gray blue-green. Resistance: yellows; tolerance to tipburn, black rot, thrips.


Green Cup.—Breeder: Reed. Vendor: Takii. Characteristics: hybrid, midseason, Bravo class, denser heads, bright green. Resistance: yellows; high tolerance to black rot, tolerance to thrips, tipburn, heat, cold.


Julius.—Breeder: Reed. Vendor: Northrup King. Characteristics: hybrid, round head, more savoyed, more open than Savoy King, semi-globe, medium large, medium green.


Little League (PSX25950).—Breeder and vendor: Petseed. Characteristics: extremely early maturity, 48-day maturity, very small heads about softball size; small compact plants, good flavor. 1994.


Marvellon.—Breeder: Reed. Vendor: Nickerson. Characteristics: hybrid, large, medium-early open, high yielder, good holding. Resistance: yellows, tipburn; tolerance to very strong to thrips.


Number 33.—Breeder: Chriseed. Characteristics: hybrid, medium maturity, blue-green, large head, flat round. Resistance: yellows; tolerance medium high to alternaria, moderate to black rot, tolerance to black speck, tipburn.


Pennant (NVH 672).—Breeder and vendor: Northrup King. Characteristics: a fresh-market type, medium frame size, blue-green in color, good wrapper leaves, healthy appearance under a wide range of climatic conditions, matures a week earlier than Rio Verde, holding


Provita.—Breeder: Reed. Vendor: Petoseed. Characteristics: hybrid, long-term storage, well wrapped, fine internal structures, deep round taperred base, medium dark green.

Puma.—Breeder: Chriseed. Characteristics: hybrid, early, market, very solid, round to slightly flat, high density, solid. Resistance: yellows; tolerance to thrips.


Red Express (I02 134).—Breeder and vendor: Petoseed. Characteristics: small size, red home garden specialty markets.


Royal.—Breeder: Reed. Vendor: Nickerson. Characteristics: hybrid, midseason red, high yielder, round-oval, yellows, tolerance to tipburn.


Storage Hybrid #4.—Breeder: Reed. Characteristics: hybrid, also good for fresh market, solid heads, round, very solid, dark green. Resistance: yellows, black speck, tip burn.


Super Red 90.—Breeder: Chriseed. Characteristics: hybrid, medium-late red, greenish red frame, medium red interior, medium, excellent holding ability. Resistance: yellows, highly tolerance to tipburn, fair to thrips.

Superdane.—Breeder: Reed. Characteristics: hybrid, late storage cultivar, high yielding, good slow quality, flattened round head, tight wrappers, blue-green. Resistance: yellows, pepperspot.

Supergreen.—Breeder: Reed. Characteristics: hybrid, very fancy, tough wrappers, good shipper, excellent quality. Resistance: yellows; tolerance to black rot, tipburn, alternaria, black speck.

Superkeeper.—Breeder: Chriseed. Characteristics: hybrid, very late, storage, medium blue-green, medium large, excellent storage holding ability. Resistance: yellows, tolerance to tipburn, tolerance to thrips.

Superlite.—Breeder: Reed. Characteristics: hybrid, fancy, tough, high tight wrappers, shipper, holds in field, sweet flavor, round, dark blue. Resistance: yellows, tolerance to black rot, black speck, tipburn.


Superpak.—Breeder: Reed. Characteristics: hybrid, blue-green wrappers, very solid, medium head, long standing in field. Resistance: yellows, tipburn; tolerance to black speck.

**CARROT**

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**Alpha Beta.**—Vendor: Shamrock. Similar: Imperator.

**Apollo.**—Vendor: Chrisseed. Similar: Imperator.


**Blaze (NVH803).**—Breeder and vendor: Northrup King. Characteristics: early, smooth, roots are cylindrical and blunt tipped, exterior and interior color of roots are deep orange. Resistance: Xanthomonas carotae, alternaria dauci, cracking. Similar: Caropak, Apache, Domi-  


**YR Storage #4.**—Breeder: Reed. Characteristics: hybrid, storage type, tall, very upright, excellent storability, round tapered base, dark blue-green. Resistance: yellows.


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**Caro Brite (XP3570).**—Breeder and vendor: Asgrow. Characteristics: fresh-market shipper for production on both mineral and muckland soils; roots are 8–11” in length, of average smoothness, slightly tapered; both internal and external color is outstanding. Resistance: alternaria, cercospora, rusty root, cavity spot. Similar: Chancellor. 1988.

**Caro Chief (XP3570).**—Breeder and vendor: Asgrow. Characteristics: a fresh-market shipper for muckland production; roots are smooth, with good orange color, average in length of 10–12”; medium tops; maturity is main season. Resistance: alternaria leaf blight. Similar: Caro-Pride. 1991.


**Corrie (SDC909).**—Breeder: G.S. McWalter. Vendor: Campbell


Dominator.—Breeder: Dessert. Similar: Imperator.


Gold Pride.—Breeder: Harris Moran. Similar: Imperator.

Gold Strike (NVH 1001).—Breeder and vendor: Northrup King. Characteristics: a fresh-market and slicing hybrid, >75-day maturity, roots average 9–10” in length by 1 1/4” in diameter, tops are 15–17” tall, bright orange color. Similar: Fanci Pak, Woodland, Sierra. 1983.


Icon.—Vendor: Chriseeds. Similar: Nantes.


Ingot.—Vendor: Chriseeds. Similar: Nantes.

Lance.—Breeder: Dessert. Similar: Imperator.


Liberty.—Vendor: Bakker. Similar: Imperator.

Long Knife.—Breeder and vendor: Pioneer.


Luxor (XPH7023).—Breeder and vendor: Asgrow. Characteristics: European Nantes type, length of root is 15–17 cm, roots are very smooth, uniform, cylindrical and blunt, maturity is early, good foliage and attachment for mechanical harvest, well-adapted bunching. Similar: Nantes. 1991.


Mercury.—Vendor: Chriseeds. Similar: Imperator.


Mokum.—Vendor: Bejo. Similar: Danvers, Chantenay.

Monique.—Vendor: Crookham. Similar: Nantes.

Motherlode.—Vendor: Shamrock. Similar: Imperator.

Nanco.—Vendor: Vilmorin. Characteristics: very versatile carrot, high quality yields, beautiful roots of length 17–20 cm, cylindrical smooth, very good coloration with no green or purple tops, solid healthy foliage, excellent keeping quality. Similar: Nantaise Tip Top. 1980.


Neptune.—Vendor: Chriseeds. Similar: Imperator.


Paydirt.—Vendor: Shamrock. Similar: Imperator.
Piece Keeper.—Breeder and vendor: Pioneer.
Plato.—Vendor: Chriseeds. Similar: Imperator.
Presto.—Vendor: Vilmorin. Similar: Nantes.
Six Pak.—Breeder: Harris Moran. Similar: Imperator.
Six Pak II.—Breeder: Harris Moran. Similar: Imperator.
Sparta.—Vendor: Chriseed. Similar: Imperator.
Spartan Bonus.—Breeder: C.E. Peterson. Similar: Danvers. Parentage: (MSU1558 x MSU3931) x MSU9541 MSU. 1968.
Sugar Snax 54.—Vendor: Sunseeds. Similar: Imperator.
Sundance (NVH 1000).—Breeder and vendor: Northrup King. Characteristics: fresh-market or slicing hybrid, 75-day maturity; produces 10–11" roots in length, 1 1/4" in diameter; tops 15–17" in length, interior and exterior color is bright orange, smooth and tapered. Similar: Fancipak. 1981.
Temptation.—Vendor: Petoseed. Similar: Imperator.
Terminator (FMX 471).—Breeder and vendor: Ferry-Morse. Characteristics: long slender 12–14" with a width of 1–1.5" cylindrical root with medium external smoothness, good orange color uniformly through out the root, strong tops. Similar: Gold Pride, Apache.

Triple Play 58.—Vendor: Sunseeds. Similar: Imperator.
Warrior (FMX 611).—Breeder and vendor: Ferry-Morse. Characteristics: 7–9" carrot with slightly tapered shape and semi-blunt tip, very smooth exterior and good color throughout, tops are medium height, dark green and very strong, good flavor. Resistance: tolerance to alternaria. Similar: Caro Spike.

CAULIFLOWER

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Artemis (XPH 5793).—Breeder and vendor: Asgrow. Characteristics: medium maturity, head coverage is excellent with upright jacket leaves, the curd is dense and well domed with nice white color. Similar: Snow Star. Adaptation: southern, central Italy for over-wintering plantings. 1992.


**Shasta (NVH 111510).**—Breeder and vendor: Rogers Brothers. Characteristics: midseason 72-day maturity, white high domed heads, large plant with good protection. Similar: Ravella. 1993.


**White Cloud (XP 5141).**—Breeder and vendor: Asgrow. Characteristics: early maturity with deep, white curd which is well protected by inner leaves that cap the curd closely. Similar: Blue Diamond. 1986.


### CELERY


### CHICKPEA (GARBANZO)

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**Baron (CA 65).**—Breeder: WECO. Vendor: Ellis. Characteristics: large seeded, very beautiful brown when processed, seeds are fine, desirable golden color. Similar: Puritan. 1984.

COLLARD

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Champion.—Breeder: Virginia Agr. Expt. Sta. Characteristics: developed as an open-pollinated population, selected out of Vates, similar to Vates in most characteristics but significantly slower in developing seed stalks in the spring following fall planting. Similar to Vates. 1979.


Vates.—Breeder: Virginia Agr. Expt. Sta. Characteristics: non-heading type, dark green, thick textured leaves with a high ratio of blade to stalk, open-pollinated population that was industry standard for almost two decades, cold hardy. Adaptation: wide. 1950.

CUCUMBER

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Abundance.—Breeder: home gardener near Rochester, N.Y. Characteristics: fruit smooth, symmetrical, yellow green specks, dark green, 9–10 × 2–2.25” fruit, pickler, inbred. Similar: Davis Perfect. 1916.

Adams.—Breeder: T. Lee Adams Co. Characteristics: fruit dark blue-green to dull green, 9–10 × 2.25–2.5” fruit, pickler, monococious, inbred. Similar: Longfellow. 1926.

Aladyn F1.—Breeder: Research Institute of Vegetable Crops, Poland. Characteristics: fruit attractive, short, green, small seed size, pickler, monococious hybrid. Resistance: anthracnose, downy mildew, powdery mildew, scab, cucumber mosaic virus.


All Season.—Characteristics: early gynoecious slicer, 49 days to harvest. 1996.


Aodai-Nazare.—Breeder and vendor: Asgrow. Characteristics: large vines and fruit, white spined, slicer, monococious, inbred.


Aria.—Characteristics: bitterfree, thin skinned, short slicer, 4–6” fruit length, nonrusty vines. 1996.


Armstrong Early Cluster.—Characteristics: early flowering, round fruit, monococious, inbred.


Barteldes.—Breeder: Barteldes. Characteristics: fruit dark green, dark green, yellow green specks, 10–12 × 2.5–3” fruit, slicer, monococious hybrid. Similar: Longfellow. 1925.

Beit Alpha.—Breeder: Dessert Seed Co. Characteristics: cylindrical fruit with slight taper, black spines, glossy green skin; middle eastern slicer; 55-day maturity, 6 × 2” fruit. Resistance: cucumber mosaic virus.


Blitz (PSX 1479).—Breeder and vendor: Petoseed. Characteristics: Semi-dwarf, small seedcell, medium green, white spined, pickler, gynoecious hybrid, L/D 3.0, vine vigorous, 51-day maturity. Resistance: anthracnose, angular leaf spot, downy mildew, powdery mil...

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**Burpless Bush.** —Breeder and vendor: Rogers NK. Characteristics: fruit straight, cylindrical, dark green, slicer hybrid, 10–12” fruit length, bush habit, firm, nearly seedless.

**Burpless Hybrid.** —Breeder and vendor: Burpee Seed. Characteristics: F1 hybrid, mild flavor, 62-day maturity, white spined, trellis type, 10” fruit length.


**Bush Crop.** —Breeder and vendor: Rogers NK. Characteristics: home garden, fruit slightly tapered, medium green, slicer, monoecious inbred, 7.5” fruit length, 55-day maturity. Resistance: scab.


**Carnimbus.** —Breeder and vendor: Royal Sluis. Characteristics: schlugarken type, monoecious, inbred, 14” fruit length. Similar: Riesenschal.


**Cezar F1** *(GOF-190).* —Breeder: Research Institute of Vegetable Crops, Poland. Characteristics: fruit uniform, green, numerous small warts, pickler, monoecious hybrid. Resistance: anthracnose, downy mildew, powdery mildew, scab, cucumber mosaic virus.


**Chinese Long.** —Parentage: obtained from China by R.H. Porter (Iowa State Univ.,); sent it to O. Shiffriss in 1930s. Characteristics: uniform green fruit (original source of trait for most American slicers). Resistance: cucumber mosaic virus (main source of trait for most American cultivars).

**Chinese Three Feet** *(Chinese Long-Remaining Green, Chinese Snake, Climbing, Climbing China, Japan Dark Green, Japanese Dark Green).* —Breeder: Dupuy and Ferguson. Characteristics: fruit light green with yellow-green speckles and dark green stripes, 18–24 × 1.75–2” size, monoecious trellis type. 1933.


**Clark’s Special** *(Imperator, Lago Nu-green).* —Breeder: Associated Seed Growers (Asgrow). Characteristics: fruit like Davis Perfect, dark green, 9–10 × 2.5–3” size, monoecious slicer. Similar: Davis. 1932.


**Conmanche 7.** —Parentage: Gy 57 x unknown inbred. Characteristics: predominantly gynoecious hybrid, white spined, slicer, 8 x 2.25” fruit, 70-day maturity, dark green, L/D 2.8, vigorous, long harvesting period. Resistance: scab, cucumber mosaic virus.

**Commander.** —Breeder: Petoseed. Characteristics: predominantly gynoecious hybrid, white spined, pickler.

**Common Rough Green Pickling.** —Breeder: Mawe and Abercrombie. Characteristics: fruit dark green, monoecious pickler, 6–7” fruit length. 1778.


**Conquistador** *(159088).* —Breeder and vendor: Petoseed. Characteristics: monoecious hybrid slicer, medium-late, vigorous plant, produces consistently high yield, cylindrical, straight, dark green fruit,

**Continental (FMX4934).**—Breeder and vendor: Ferry-Morse. Characteristics: predominantly gynoecious pickler, fruit very straight, with blocky, blunt ends, good yield uniformity, machine and hand harvest, medium dark green, white spined, L/D 2.8–3.2, 52–54-day maturity, small seedcell, slow seed development. Resistance: powdery mildew, downy mildew, scab, anthracnose, cucumber mosaic virus, angular leaf spot. Similar: Discover, Vlaspik, Flurry, Royal.


**Coolgreen.**—Breeder and vendor: Asgrow. Characteristics: monoecious, middle eastern slicer, brown spined, inbred, 6” fruit length. Similar: Beit Alpha.


**Cortez.**—Breeder and vendor: Petoseed. Characteristics: predominantly gynoecious hybrid, very vigorous, straight very dark green fruit, 61-day maturity. Resistance: powdery mildew, anthracnose, angular leaf spot, cucumber mosaic virus, papaya ringspot virus, watermelon mosaic virus 2, zucchini yellow mosaic virus.

**Country Pick (FMX4937).**—Breeder and vendor: Ferry-Morse. Characteristics: very dark green fruit color holds well even in warm climates, slightly tapered shape. Resistance: scab, cucumber mosaic virus, angular leaf spot, powdery mildew, downy mildew, anthracnose. Similar: Royal, Flurry, Pick Rite.


**Cracker Lee.**—Vendor: Natl. Seed Storage Lab. Characteristics: slicer inbred, 56-day maturity, cylindrical, slight taper, 8 × 2.5” fruit, white spined, dark green, good shipping. Resistance: anthracnose, angular leaf spot, downy mildew, powdery mildew.


**Cumberland (New Cumberland).**—Breeder and vendor: Chauncey P. Coy and Sons. Characteristics: fruit straight, rough, medium green, 7–8 × 2–2.25” fruit, monococious pickling inbred. 1902.


**Danish Pickling.**—Breeder: L. Daehnfeldt. Characteristics: fruit dull dark green, 12–15 × 2.5–3” fruit, monococious pickling inbred. Similar: Cumberland. 1912.

**Darina.**—Breeder and vendor: Royal Sluis. Characteristics: dark green cylindrical fruit, white spined, 3 days earlier than Bellando; white spined, gynoecious hybrid slicer, 8” fruit length. Resistance: anthracnose, angular leaf spot, downy mildew, powdery mildew, scab, cucumber mosaic virus.


**Daytona (PS 191091).**—Breeder: S. Kimbrue. Vendor: Petoseed. Characteristics: very dark green fruit, white spined, medium early maturity, gynoecious hybrid; fruit vigorous, straight, color exceptional; performs well on plastic and ground culture, fruit hold length under stress, 60-day maturity. Resistance: powdery mildew, downy mildew, scab, cucumber mosaic virus, angular leaf spot race 1, watermelon mosaic virus, zucchini yellow mosaic virus, papaya ringspot virus. Similar: Darker II.

**Deltus.**—Breeder: A. Titus. Characteristics: fruit dark green, 9–10 × 2.25–2.5” fruit, sliced, monococious hybrid. 1919.


**Double Yield Pickle.**—Breeder and vendor: Joseph Harris Co. Characteristics: 50-day maturity, high yield, Fruit medium green, 5–6 × 1.88–2” fruit, monococious pickle inbred. 1924.


**Dungan (NUN 6514).**—Breeder and vendor: Nunhems. Characteristics: gynoecious, parthenocarpic, suitable for rockwool or soil culture, high production, good endurance until the end of the cropping period, normal length fruit on stems and lateral branches. Adaptation: greenhouse. 1990.


**Earliest of All (Burrells Earliest of All, Earliest White Spine, First Crop, First of All, Forty Day, Mills Earliest).**—Breeder and vendor: Ferry-Morse. Characteristics: fruit straight, moderate dark
Improved Early Green Cluster, Table Queen.—Breeder: John Lewis Childs. Characteristics: monoecious slicer, fruit straight, medium bright green, 6–7 × 2.25–2.5” size. 1899.

Early Cluster (Cluster, Early Cluster Prickley, Green Cluster, Improved Early Green Cluster, Table Queen).—Breeder and vendor: Mawe and Abercrombie. Characteristics: fruit straight, tapers toward end, light green, 5–6 × 2.25–2.5” size, white spined, monoecious pickle, 53-day maturity. 1778.

Early Cyclone (Cyclone, White Cluster).—Breeder: Chauncey P. Coy. Characteristics: fruit straight, medium green, 3.5–4 × 2.25–2.5” size, monoecious slicer. 1900.

Early Fortune (Special Dark Green).—Breeder: J. Bolgiano and Son of Baltimore. Vendor: Natl. Seed Storage Lab. Characteristics: monoecious slicer; cylindrical, white spined fruit, dark green, 8–9 × 2.25–2.5” size; maintains color and freshness over long periods, 65-day maturity. 1906.

Early Frame (Early Frame Short Green, Early Prolific Short Green, Early Short Green, Early Short Prolific, Extra Early Frame, Short Green).—Characteristics: fruit straight, dark green, 6–7 × 2.25–2.5” size, monoecious slicer. McMahon Gardeners Catalog. 1806.


Early Perfection.—Breeder and vendor: Sakata Seed. Characteristics: highly productive Telegraph type of F1 hybrid for greenhouse forcing, gynoecious, 16” fruit length. Adaptation: greenhouse.


Early Russian (Borowskian, Early Russian Gherkin, Extra Early Russian, Improved Early Russian, Muronian, Muronian Gherkin, Russian Gherkin, Russian Gherkin, Russian Shortish Green, Russian Small Early Pickling, Small Early Russian).—Breeder: Hovey and Co. Vendor: Natl. Seed Storage Lab. Characteristics: fruit moderate light green, 3.5–4 × 1.75–2” fruit, tapers at ends, monoecious pickler, 50–55-day maturity. 1854.

Early Set.—Breeder and vendor: Sakata Seed. Characteristics: small plant size, may plant more closely, earlier and longer producer, gynoecious hybrid slicer, 8.5” fruit length. Resistance: powdery mildew.

Early Short Prickley (Early Short Green Prickley, Short Prickley, Short Green Prickley).—Breeder: Mawe and Abercrombie. Characteristics: fruit smooth, 3–4” fruit length, monoecious slicer. 1778.


Early Surecrop Hybrid.—Breeder and vendor: Petoseed. Characteristics: monoecious hybrid slicer, 8” fruit length.

Early White.—Breeder: New York Agr. Exp. Sta. Characteristics: fruit straight, greenish white, 8–9 × 2.5–3” size, monoecious inbred slicer. 1887.


Early Yellow Dutch.—Breeder: Geneva. Characteristics: fruit curved, greenish white, 8–9 × 2.5–3” size, monoecious inbred slicer. 1884.


Euromerican.—Breeder and vendor: Rogers NK. Characteristics: fruit slightly tapered, bright green, slicer, monoecious hybrid, 10” fruit length, 60-day maturity, sweet thin skin, small seedcell. Resistance: scab, cucumber mosaic virus.


Eversweet.—Characteristics: inbred slicer with bitterfree, black spined fruit.


Fojin (Mandarin, New Early Fojin, Quality).—Breeder: Vaughan Seed. Characteristics: fruit slightly curved, medium dark green, 8–9 × 1.7 5–2” size, monoecious slicer. 1932.

Fordhook Famous (Early Fordhook White Spine, Fordhook
**Fancy, Fordhook White Spine, Imperial.**—Breeder: Mr. A. McInnis, Canada. Characteristics: fruit straight, light green, 10–12 × 2.5–3” size, monoecious slicer. 1894.

**Fordhook Pickling (Fordhook, New Fordhook Pickling).**—Breeder: C.P. Coy. Characteristics: fruit usually straight, medium dark green, 7–8 × 2.25–2.5” fruit, monoecious pickler. 1896.


**Fushinari.**—Breeder: Oriental. Characteristics: fruit straight, light green, 8–9 × 1.5–1.75” size, monoecious slicer. 1927.


**Galaxy u.**—Breeder: H. Munger, Cornell Univ. Characteristics: Galaxy with uniform green fruit color gene added by backcrossing.

**Garden (Dual).**—Breeder: M.L. Robbins, Clemson Univ. Characteristics: long fruited picker, for home garden use, white spined, monoecious inbred. Resistance: high to anthracnose and chilting.

**Gemini7.**—Breeder: W.C. Barnes, Clemson Univ. Vendor: ARCO. Parentage: Gy 57u x Tablegreen. Characteristics: predominantly gynoecious hybrid slicer, fruit straight, white spined, slightly taper, vigorous, 8.5 × 2.5” size, 60-day maturity. Resistance: cucumber mosaic virus, scab. Similar: Ashley.


**Giant Pera (Grand Pera, Long Giant Pera, Long Green Giant Pera, Mammoth Giant Pera, New Giant Pera, Pera).**—Breeder: Dr. Harris (Pennsylvania) and W. Atlee Burpee. Characteristics: monoecious hybrid trellis slicer, fruit light green, 12–15 × 2.5–3” size. 1886.


**Green King.**—Breeder: Sakata Seed. Characteristics: gynoecious hybrid slicer; extra early, high yielding, recommended for mild climate, heavy producer, 8.5” fruit length. Resistance: powdery mildew, cucumber mosaic virus.

**Green Knight Hybrid.**—Breeder: Burpee Seed. Characteristics: hybrid trellis slicer, 60 days maturity, long, straight, dark green fruit, 12” fruit length.


**Hanover.**—Characteristics: monoecious, inbred, schalburgkentype, 14” fruit length. Similar: Riesenschal.


**Harvestmore.**—Breeder and vendor: Rogers NK. Characteristics: monoecious hybrid slicer, consistent yield, long harvest, 63-day maturity, 8.4–9” fruit length, dark green. Resistance: angular leaf spot, cucumber mosaic virus, scab, downy mildew, powdery mildew, anthracnose race 1. Similar: Slice King.


**Heron F1.**—Breeder: Research Institute of Vegetable Crops, Poland. Characteristics: monoecious hybrid picker, fruit attractive, dark green, small seed size. Resistance: anthracnose, downy mildew, powdery mildew, scab, cucumber mosaic virus. Similar: longer fruit than Aladyn F1.


**Homegreen #2 (Homegreen).**—Characteristics: monoecious inbred. Resistance: gummy stem blight.


**Iceland (Burbank’s Iceland).**—Breeder: Luther Burbank. Characteristics: monoecious slicer, fruit nearly white, 3.5–4 × 2.5–2.75” size. 1917.


Improved Long Green.—Vendor: Dessert Seed Co. Characteristics: slicer, fruit tapered, warty, 10 × 3" size, 70-day maturity, black spined, dark green. Adaptation: home garden.


Irish Queen (New England).—Breeder: S.M. Isbell and Co. Characteristics: monoeccious slicer, fruit straight, light green, 6–7.5 × 2.5–2.75" size. 1916.


Jordan.—Vendor: Hollar. Characteristics: 6.5" fruit length, glossy green, 56-day maturity, heavy yield, gynoecious hybrid, middle eastern slicer. Similar: Be Alpha.

Khiva (Brown Netted, Early Netted Russian, Khiva Netted, Long Netted Russian, Netted Russian, Russian Netted Cluster).—Breeder: Khiva, B.K. Bliss and Sons. Characteristics: monoeccious, fruit straight, dark green, 4.5–5 × 2.5–3.5" size. 1880.


Long Green Turkey (Extra Early Green Turkey, Green Turkey, Improved Extra Long Green Turkey, Landrath First, Landrath First Early, Early Long Smooth Green Turkey, Long Turkey, Turkey). Characteristics: monoeccious open-pollinated slicer, fruit green, 10–15" fruit length. 1778.


Marathon.—Breeder and vendor: Petoseed. Characteristics: monoeccious slicer, strong, vigorous vines, fruit straight, uniform dark green, good color, 8.5 × 2.25" size, 64-day maturity. Resistance: scab, cucumber mosaic virus, powdery mildew, anthracnose race 2, angular leaf spot.

Marketer Long.—Breeder: Hollar. Characteristics: monoeccious inbred slicer, 8.5" fruit length, dark green fruit, 64-day maturity.


Marketmore 72F.—Breeder: H. Munger, Cornell Univ. Characteristics: predominantly gynoecious slicer, fruit short oval, 3" diameter, greenish yellow-lemon yellow-golden yellow, 3–3.5 × 2.5–2.75" size, black spined, prolific fruiting, sweet taste. Adaptation: home garden. 1894.


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Maximor 100.—Vendor: Abbott & Cobb. Characteristics: hybrid slicer, 55-day maturity, fruit very dark green, smooth, straight, white spined, 8.5 × 2.75”. Resistance: angular leaf spot, anthracnose, downy mildew, powdery mildew, scab, cucumber mosaic virus.


Minucu Extra Early.—Vendor: ARCO. Characteristics: slicer or pickler, white spined, medium green, oblong, 4.5 x 2” fruit, 50-day maturity.


Monika.—Breeder: Research Institute of Vegetable Crops, Poland. Characteristics: monoclinous hybrid slicer, fruit uniform dark green, 11.5–12 x 3.1 cm size.

Mountain Perfection.—Breeder: Grand Junction. Characteristics: monoclinous slicer, fruit slightly curved, dark green, 12–14 × 2.5–2.75”. Size. 1928.

Muncher.—Characteristics: middle eastern slicer, 6.5” fruit length, medium green, 59-day maturity. Resistance: cucumber mosaic virus. Similar: Beit Alpha.


Nichols Medium Green (Medium Green, Medium Pickling, Nichols Green).—Breeder: A.W. Livingston and Sons. Characteristics: monoclinous open-pollinated pickler, fruit straight, light green, 6–7 x 2.5–3” size. 1884.


Oasis.—Breeder: Ball Seed. Characteristics: slicer.


**Prolific Pickling**.—Breeder: Oris. Characteristics: monoeocious open-pollinated pickler, black spined, fruit straight, dark green, 9–10 × 2.25–2.5" size. 1892.


**Patton (Sun 3528).**—Breeder and vendor: Sunseeds. Characteristics: predominantly gynoecious hybrid pickler, fruit dark green, white spined, slightly tapered, machine or hand, shorter vines than Calypso, white spined, L/D 3.1. Resistance: anthracnose, angular leaf spot, downy mildew, powdery mildew, scab, cucumber mosaic virus.


**Picklebush.**—Breeder and vendor: Burpee Seed. Characteristics: dwarf pickler, 52-day maturity, short vines 20–24" long, 4.5" fruit length. 1986.


**Pinnacle.**—Breeder and vendor: Rogers NK. Characteristics: predominantly gynoecious pickler, L/D 2.9, blunt, medium green, 55-day maturity, uniform hybrid, high yields, few nubs. Resistance: anthracnose, angular leaf spot, downy mildew, powdery mildew; scab, cucumber mosaic virus.


**Poinsett 97.**—Breeder: H. Munger, Cornell Univ. Parentage: (Poinsett 87 x Poinsett 93) x Poinsett 93) x Poinsett 93) inbred. Characteristics: white spined, slicer, monoeocious, inbred, 8" fruit length. Resistance: anthracnose, angular leaf spot, powdery mildew (better than Poinsett 76), scab, target leaf spot, Ulocladium, cucumber mosaic virus, zucchini yellow mosaic virus, papaya ringspot virus, watermelon mosaic virus-2. 1997.


**Prolific.**—Breeder and vendor: Sakata Seed. Characteristics: predominantly gynoecious hybrid slicer, white spined, 8" fruit length, main season. Similar: Dasher II.


**Quick Set.**—Breeder and vendor: Sakata Seed. Characteristics: predominantly gynoecious hybrid slicer, vigorous, early, high yielding, recommended for growing in South America and Southern Europe, 8.5" fruit length. Resistance: angular leaf spot, moderate to powdery mildew and cucumber mosaic virus.


**Salad (White).** —Breeder: Mrs. T.P. Mony, California. Characteristics: monooecious slicer, fruit slightly curved, pale greenish-yellow to lemon-yellow to bright yellow, 6–7 × 2.25–2.25" size. 1924.


**Seneca Longbow.** —Breeder and vendor: Robson Seed. Characteristics: predominantly gynoecious hybrid slicer, high yield, early maturity, long dark green fruit, even under stress.


**Shenandoah (FMX 4937).** —Breeder and vendor: Ferry-Morse. Characteristics: predominantly gynoecious hybrid pickler, very dark green skin, blocky to slightly tapered on blossom end, white spined, L/D 2.7–2.9, small seedcell, excellent interior quality, machine and hand harvest, 50–52-day maturity, high yields, excellent for brining, resistant tobleaching in sunlight. Resistance: anthracnose, angular leaf spot, downy mildew, powdery mildew, scab, cucumber mosaic virus.


**Siberian (Early Siberian, Extra Early Siberian, New Siberian).** —Breeder and vendor: Northrup King. Characteristics: monooecious open-pollinated slicer, fruit straight, light green, 5–5.25 × 1.88–2" fruit. 1889.

**Slice King S.** —Breeder and vendor: Sakata Seed. Characteristics: predominantly gynoecious hybrid slicer, medium dark green fruit 8" long, early season. Resistance: scab, powdery mildew, downy mildew, angular leaf spot. Not the same as Slice King from Northrup King.

**Slice King N (NVH 2160).** —Breeder and vendor: Northrup King. Characteristics: predominantly gynoecious hybrid slicer, uniform green, excellent shape that is ideal for slicing. Resistance: scab, powdery mildew, downy mildew, cucumber mosaic virus tolerance. Not the same as Slice King from Sakata. 1989.

**Slice Max (Exp 7).** —Breeder and vendor: Sakata Seed. Characteristics: predominantly gynoecious hybrid slicer, white spined, 8" fruit length, midseason. Resistance: powdery mildew.

**Slice Nice (DEXP 3).** —Breeder: A. Gabert. Vendor: ARCO. Characteristics: predominantly gynoecious hybrid slicer, white, spined, uniform color, 8.5 × 2.5" fruit, 70-day maturity, vines withstand multiple harvest handling, straight, blocky. Resistance: cucumber mosaic virus, powdery mildew, downy mildew, angular leaf spot, scab, anthracnose. Similar: Dasher II. 1984.

**Slice Top.** —Breeder and vendor: Sakata Seed. Characteristics: predominantly gynoecious hybrid slicer, white sinped, dark green fruit, 8" fruit length, main season. Resistance: scab, downy mildew, powdery mildew, angular leaf spot. Similar: Marketmore, but higher yield.


**Snows Pickling ( Fancy Pickle, Snows Early, Snows Fancy Pickling, Snows Perfected Pickle).** —Breeder: Mr. J. C. Snow. Characteristics: monooecious inbred pickler, fruit straight, moderate dark green, 5–6 × 1.5–1.75" size. 1905.


**Spacemaster 80.** —Breeder: H. Munger, Cornell Univ. Character-

Spartan Salad (C7-63).—Breeder: C.E. Peterson, Michigan State Univ. Characteristics: monoecious inbred, slight taper, 7.5 × 2" fruit, black spined, uniform shape and size, medium green, 60-day maturity, for pickling and slicing. Resistance: downy mildew, powdery mildew, scab, cucumber mosaic virus.


Stokes Early Hybrid.—Breeder and vendor: Stokes Seed. Characteristics: predominantly gynoecious hybrid slicer, 8" fruit length, 55-day maturity. Resistance: moderate to downy mildew and cucumber mosaic virus.


Striker (XPH 1471).—Breeder and vendor: Asgrow. Characteristics: predominantly gynoecious hybrid slicer, for use where Marketmore 76 is planted, fruit slightly longer than Marketmore 76, second early maturity, white spined, 8–9" length, blocky ends. Resistance: downy mildew, powdery mildew, cucumber mosaic virus, anthracnose, angular leaf spot, scab. Similar: Marketmore 76.


Supersett (Floracuke).—Breeder and vendor: Petoseed. Characteristics: predominantly gynoecious hybrid slicer, fruit white spined, cylindrical, uniform dark green, 8.5 × 2.25" size, vine vigorous, 60-day maturity, excellent packout, high quality fruit. Resistance: anthracnose race 2, angular leaf spot, downy mildew, powdery mildew, scab, cucumber mosaic virus.


Sweet Crunch.—Breeder and vendor: Sakata Seed. Characteristics: predominantly gynoecious middle eastern slicer, mid-early maturity, medium green fruit. Resistance: downy mildew, powdery mildew, cucumber mosaic virus, squash mosaic virus, watermelon mosaic virus 2. Similar: Beet Alpha, higher yield than Sweet Alphee in some areas.


Sweet Success.—Breeder and vendor: Petoseed. Characteristics: gynoecious hybrid slicer, white spined, fruit very long, straight, rounded at blossom end, medium green, smooth 12–14 × 2.25" size, 54-day maturity, parthenocarpic, market and home garden, AAS winner. Resistance: scab, cucumber mosaic virus. Adaptation: greenhouse.


Tablegreen 76.—Breeder: H. Munger, Cornell Univ. Characteristics: high powdery mildew resistance backcrossed into Tablegreen 65. Has many traits of Marketmore 76 and Poinsett 76, but released later. 1996.


Tailby’s Hybrid (Bismarck, Improved Bismarck, New Orleans Market, Giant Tailby Hybrid, Tailby).—Breeder: Joseph Tailby. Characteristics: monoecious open-pollinated slicer, fruit straight, very dark green, 8–9 × 2.5–2.75" size. 1872.


Tokyo Long Green.—Parentage: given by a Japanese seed company in California to S.P. Doolittle (USDA), who gave it to O. Shifriss, Cornell Univ., in 1936. Characteristics: vigorous vines, late maturity,
L/D similar to American slicer, light green, tendency toward bitter fruit and internal fruit defects; used as parent of successful slicer hybrids. Resistance: cucumber mosaic virus.


**Trailblazer.**—Breeder: Robson Seed / Midwest Seed Growers. Characteristics: hybrid slicer, dark green fruit, high yield. 


**Victoria (Sun-3547).**—Breeder and vendor: Sunseeds. Characteristics: monoecious hybrid pickler, white spined, 48-day maturity, slightly tapered fruit, good length. Resistance: powdery mildew, downy mildew, scab, cucumber mosaic virus, papaya ringspot virus, watermelon mosaic virus, zucchini yellow mosaic virus.


**White German (Extra Long White, Giant White, Long Snow White, Long White, New Giant White, Pennsylvania Long White, White Dutch).**—Characteristics: monoecious open-pollinated slicer, fruit straight, greenish white, 10–12 × 2.25–2.5” size. 1778.


**Woodruff Hybrid.**—Breeder: Massachusetts. Characteristics: monoecious slicer, fruit straight, dark green, 9–10 × 2.25–2.5” size.


**Zenith (FMX 4761).**—Breeder and vendor: Ferry-Morse. Characteristics: predominantly gynoecious hybrid slicer, fruit very dark green, very straight, 7.5–8.5” length. Resistance: scab, powdery mildew, downy mildew, tolerance to cucumber mosaic virus. Similar: Dasher II.

**Zeppelin.**—Breeder and vendor: Van Der Ploeg. Characteristics: schlalgunken type, monoecious, inbred, 14” fruit length. Similar: Riesenschal.

CUCUMBER—ARMENIAN

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Armenian.—Breeder: Burpee Seed. Characteristics: 70-day maturity, long, thin, light green, inbred, 24” fruit length, snake (Armenian) cucumber, Cucumis melo var. flexuosus.

Armenian Yard Long.—Vendor: Natl. Seed Storage Lab. Characteristics: monoecious, inbred, 60-day maturity, 36 x 4” fruit, white spined, light green, curved, ribbed, extra long fruit, snake (Armenian) cucumber, Cucumis melo var. flexuosus.


DAIKON

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Mino Spring Cross.—Vendor: Sakata Seed. Characteristics: a slow bolting radish suitable for late spring growing, roots are white skinned, texture is juicy, taste is mild, high level of disease resistance.


Omny F1.—Breeder and vendor: Sakata Seed America. Characteristics: a white shouldered, all-season-type hybrid.


Relish Cross.—Vendor: Takii and Company. Characteristics: green root shoulder color, root length is 38 cm, 60-day maturity. Resistance: moderate tolerance to fusarium, strong tolerance to heat, cold.

SDA0102 F1.—Breeder: Sakata Seed America. Characteristics: green shouldered, slightly tapered root, excellent taste, slow bolting.

EGGPLANT

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Rega (NVH 2227).—Breeder and vendor: Northrup King. Characteristics: long oval-shaped fruit, size =7” x 3.5” deep, glossy dark purple color, is very vigorous, uniform in height, the very glossy purple color is unique characteristic of this cultivar. 1986.


UGA 1-MS (Male Sterile).—Breeder: Phatak and Jaworski. Vendor: Coastal Plain Agr. Res. Sta., Tifton, Ga. Characteristics: 80–110 cm tall, vigorous, purple flowers, leaves and stem, fruit is purplish-black, oval shape, deep purple color, plant is very vigorous, uniform in height, the very glossy purple color is unique characteristic of this cultivar. 1986.

ENDIVE

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Bossa.—Breeder and vendor: SeedWay. Characteristics: 90-day maturity, head size 12 to 14”, deep green, broad, slightly upright leaves, midrib creamy white.

Coral.—Breeder and vendor: Johnny’s Selected Seeds. Characteristics: medium size, upright dense head of wavy, mid-green, broad leaves, partially self-blanches, creamy yellow to white, well-filled heart, slow bolting, replaces Nuvol, 48-day maturity.

Cornet d’Anjou.—Breeder and vendor: Cook’s Garden. Characteristics: resembles mouth of a horn, best in fall and spring, blanched heart, slow bolting, replaces Nuvol, 48-day maturity.

Escarole.—Breeder and vendor: Burpee Gardens. Characteristics: broad leaved Batavian, 90-day maturity, large, broad, slightly twisted lettuce-like leaves, round plants up to 16” across, heart very deep, well blanched, creamy white with buttery texture. 1991.


Florida Deep Heart.—Breeder and vendor: Twilleys Seeds. Characteristics: 90-day maturity, broad leaf southern type produces broad, dark green, coarsely crumpled leaves with white midribs.

Frisan.—Breeder and vendor: Stokes. Characteristics: 98-day maturity, heads average 41 cm across, very well filled with well blanched centers, outer leaves are dark green, longer.

Full Heart Batavian Escarole.—Breeder: Royal Sluis. Vendor: Stokes. Characteristics: 85-day maturity, imported strain NR65 from Royal Sluis, upright, broad smooth dark green leaves with less basal rot, nicely bunched creamy yellow blanched centers.

Galia.—Breeder and vendor: Cook’s Garden. Characteristics: similar to Fine Curled but more petite and finely cut leaves, more


Grossee Bouchée.—Breeder and vendor: Willihtte. Characteristics: 50-day maturity, very tight heart, smooth leaves are long and well blanched, tender, crunchy leaves, easy to grow. 1993.


Neos.—Breeder and vendor: SeedWay. Characteristics: 90-day maturity, head size 12–14”, leaves light green, pale green finely cut midrib color, finely curled, heavy heads with well-blanched centers.

President.—Breeder and vendor: Seeds Blum. Characteristics: hardiest in fall.

Rhoodos.—Breeder and vendor: Johnny’s Selected Seeds. Characteristics: French Tres Fine Maraichère type, smooth, deeply cut, toothed grey-green leaves, mass of tender, white-blanched leaves at heart, harvest early before showing tipburn or bottom rot.

Salad King.—Breeder and vendor: Johnny’s Selected Seeds. Characteristics: vigorous, healthy, curly, deep green, toothed, curled leaves, very heavy and large, slow bolting, 52-day maturity, Wallonne type. Resistance: tolerance to tipburn and frost. Similar: Wallonne.

Salad King Improved.—Breeder and vendor: Harris Moran. Similar: Salad King.

Sinco Escarole.—Breeder and vendor: Shepard’s Garden. Characteristics: big head, large outer leaves folded around a closely bunched crunchy heart, leaves are extra crispy and succulent.

Sugarloaf.—Breeder and vendor: Cook’s Garden. Characteristics: known in France as Pain de Sucre, relatively large, cos-like green head, high yielding, best as a fall crops, 80-day maturity.

Tosca.—Breeder and vendor: Stokes Growers Guide. Characteristics: 85-day maturity, very large, early type with very fine “shoe string” leaves, narrower than other types, medium green leaves, white blanched hearts.

Tosos.—Breeder and vendor: SeedWay. Characteristics: 90-day maturity, head size 12–14”, dark green, finely cut leaves, midrib is pale green, very finely curled. Resistance: tolerance to cold.


Tres Fine.—Breeder and vendor: Shepard’s Garden. Characteristics: extra finely cut, lacy leaves, delicate crispy ribs and cream colored hearts, slow bolting, easy to grow.


Wallonne.—Breeder and vendor: Seeds Blum. Characteristics: excellent fall and winter type.

Wallonne race Lorca.—Breeder and vendor: Vilmorin. Characteristics: adapted for cropping in autumn, petioles are curled right to the base of intermediate size, very full dense centers, good yield of blanched leaf. Similar: Minerva. 1990.

**Der Wing.**—Vendor: Burpee. Characteristics: fruit oval, 5–6” long × 2.5–3” diameter, warty, rind white, flesh light yellow with greenish tinge; supposedly selected from Chinese germplasm. 1892.

**Egg (Nest Egg, White Egg, Goose Egg).**—Characteristics: fruit obovate, 2.5–3” long × 1.7–2.5” diameter at widest point near blossom end, rind typically all white but cultivars with green stripes may also be sold under this name. Burr’s Field and Garden Vegetables of America. 1865.

**Flat Striped (Broad Striped, White-striped Flat Fancy Gourd).**—Vendor: Vilmorin. Characteristics: fruit short cylindrical, 1.5–2.5” long × 3–4” diameter, flattened to concave at ends, somewhat angular around circumference, rind dark green with lighter colored stripes or marbling, flesh bitter. 1885.

**Ladle (Scoop).**—Characteristics: fruit elongated pear shaped, 6–8” long, often warty, rind often bicolored as in Bicolor Pear. Bailey, 1937.

**Miniature (Miniature Ball).**—Vendor: Vilmorin. Characteristics: fruit oblate to nearly spherical, 1.5” long × 1.5–2” diameter, rind dark green variegated with pale green stripes. 1885.

**Orange (Orange Ball, Mock Orange).**—Characteristics: fruit spherical to oblong, 3–4” diameter to 5” long, surface smooth, rind orange. Burr, 1865.

**Pear, Bicolor (Ringed Pear).**—Vendor: Vilmorin. Characteristics: similar to Striped Pear, but the stem end half is striped in shades of yellow and the blossom end in greens; Ringed Pear is a variant where the green portion forms only a rind instead of covering half the fruit. Similar: Striped Pear. 1885.

**Pear, White.**—Vendor: Vilmorin. Characteristics: fruit pear shaped, 3–5” long, surface smooth, rind white. 1885.

**Pineapple (Early Pineapple, White Pineapple, White Turban).**—Vendor: Burpee. Characteristics: fruit 8” long × 8” diameter, spindle shaped with five pairs of prominent projections around the median, some inclined outwards and others towards the apex or base, rind white; supposedly selected from Chilean germplasm. 1884.

**Spoon (Bicolar Spoon, Small Spoon).**—Characteristics: similar to Bicolar Pear except that the stem-end neck is elongated and may be curved. Similar: Bicolar Pear. Bailey, 1937.

**Warty (Orange Warted, Warty Headhard, Warty Fancy Gourd).**—Vendor: Vilmorin. Characteristics: fruit oblate to spherical to short oblong, 3–4” diameter, covered with numerous round protuberances or warts, rind orange, green, or rarely white, sometimes striped. 1885.

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**GOURD—LAGENARIA**

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**Birdhouse (Purple Martin House, Bird’s Nest).**—Characteristics: large bilobal with slender neck, thick rind, large blossom end bowl, 8–14” diameter, suitable for making birdhouse, 95–120-day maturity. Whitaker & Davis’s Cucurbits, 1962.

**Blow Gun Kapok (Cofan Kapok).**—Vendor: Seed Saver’s Exchange. Characteristics: fruit 6” long with a 3–4” bowl, 150-day maturity; from Cofan people of the Amazon. 1996.

**Bottle (Common Bottle, Pilgrim, Dumbbell).**—Vendor: Vilmorin. Characteristics: bilobal fruit up to 18” long with the two unequal bowls separated by a constricted neck, the larger blossom end bowl contains the seeds. Burr, 1865.


**Bottle, Large.**—Vendor: DeGiorgi. Characteristics: bilobal with large blossom end bowl up to 14” diameter. 1985.

**Bottle, Mexican.**—Characteristics: 12” or more long bilobal, smaller stem end bowl topped with a nipple. American Gourd Society, 1996.


**Bottle, Sennari (Sennari).**—Characteristics: small bilobal, 2–6” long, the smaller stem end bowl topped with a nipple; used as sake container in Japan. American Gourd Society, 1994.


**Cannonball.**—Characteristics: small spherical fruit, 2.5–4” diameter. American Gourd Society, 1994.


**Club (Clavata, Hercules Club, Trumpet).**—Characteristics: long cylindrical fruit which slowly enlarges towards the blossom end, where it is about twice as large in diameter as it is at stem end. Naudin’s Annales des Sciences Naturelles, 1859.

**Corsican Flat (Courge Plate de Corse, Flat, Canteen, Bowl, Sugar Bowl).**—Vendor: Vilmorin. Characteristics: conical to discoid fruit, measuring 3–4” long × 6–15” diameter. 1883.

**Cow Leg.**—Characteristics: high resistance to viruses; from Taiwan. Cucurbit Genetics Cooperative Report, 1995.

**Dipper (Siphon, Retort).**—Vendor: Vilmorin. Characteristics: fruit with swollen blossom end, 8–12” diameter, thin elongated neck, rind thick and hard. Burr, 1865.


**Dipper, O’odham.**—Vendor: Native Seeds, Search. Characteristics: dipper shaped fruit measuring 8–18’ long; from Tohono O’odham Nation at Topawa. 1996.


**Dipper, Short Handled.**—Characteristics: dipper shaped fruit with relatively thick neck measuring about 8” long. Summit, 1998.

**Dipper, South Seas Island.**—Characteristics: dipper shaped fruit with neck 16” long, bowl 6” diameter, rind green with white spots. 1988.


**Pipe (Calabash Pipe, South African Calabash Pipe).**—Characteristics: fruit with a curved gradually tapering neck, making it suitable to use as the curved bowl of a pipe, rind thick. USDA, BPI Circ., 1909.

**Powder Horn (Courge Poire à Poudre, Powder, Penguin).**—Vendor: Vilmorin. Characteristics: elongated pear shaped fruit with a distinct and somewhat curved neck at stem end, 12–15” long x 3–5” diameter at widest point near blossom end; original from France. Burr, 1865.

**Pusa Summer Prolific Long.**—Characteristics: fruit 1.5–2’ long, eaten immature, an improved cultivar that is prolific. Tindall, 1983.


**Small Gourd of Brazil.**—Characteristics: small bilobal fruit, 3–4” long with very hard rind, the small seeds are almost triangular. Naudin, 1859.


**Snake, Long Green (Elongata).**—Characteristics: club-shaped fruit to 4’ long, rind dark green with white streaks or specks; original from Egypt. Naudin, 1859.

**Snake, San Juan.**—Characteristics: thin cylindrical fruit to 3’ long which curves when grown on ground; from southwestern U.S. 1994.

**Snake, Wonder.**—Vendor: Gleckler’s. Characteristics: club-shaped fruit 5’ long; from India. 1993.

**Summer King.**—Characteristics: club-shaped fruit 1.5–2’ long, rind uniform yellowish green, flesh firm and white, an old bush cultivar. Facciola, 1990.


**Tobacco Box (Snuff Box).**—Characteristics: similar to Coriscan Flat but smaller and more conical than discoid, sometimes with a slight taper at stem end. Similar: Coriscan Flat. Naudin, 1859.


**Trough, Sugar.**—Characteristics: similar to Trough but with a more tapering end. Similar: Trough, Bailey, 1937.

**Verma Wonder.**—Characteristics: relatively new cultivar producing many fruits on very small plants; from India. Facciola, 1990.


**Zucca (Sheep’s Nose).**—Characteristics: thick cylindrical fruit, 3–4’ long x 8–10” diameter, thin rind, eaten immature. Similar: Longissima, 1938.


GOURD—LUFFA RIDGE
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Fletcher.—Breeder: DeCourley, Missouri. Characteristics: high yield of high-quality sponges with 100 x 400-mm size.

Hollar Luffa (13204).—Vendor: Hollar & Co. Characteristics: moderate to high yield of high-quality sponges with 97 x 428-mm size.

Leng Si Gua (ZWRM 133).—Parentage: from China. Characteristics: high yield of moderate-quality sponges with 60 x 350-mm size.


Orol Ledden Luffa.—Vendor: Orol Ledden & Sons. Characteristics: moderate to high yield of high-quality sponges with 98 x 429-mm size.

Pang Si Gua (ZWRM 134).—Parentage: from China. Characteristics: moderate yield of moderate-quality sponges with 100 x 430-mm size.


Quan Zhou Chang Tiao Gua (ZWRM 141).—Parentage: from China. Characteristics: high yield of moderate, high-quality sponges with 50 x 180-mm size.

Richters Luffa (53795).—Vendor: Otto Richter and Sons Ltd. Characteristics: moderate to high yield of high-quality sponges with 98 x 431-mm size.

Shi Ting Da Quing Pi (ZWRM 137).—Parentage: from China. Characteristics: high yield of moderate-quality sponges with 60 x 540-mm size.


Sunrise (Walters 401).—Characteristics: moderate to high yield of moderate-quality sponges with 78 x 495-mm size.

USA Luffa (Guatemala).—Vendor: USA Luffa Inc. Characteristics: moderate to high yield of moderate-quality sponges with 72 x 464-mm size.

Xiang Si Gua (ZWRM 136).—Parentage: from China. Characteristics: low yield of moderate-quality sponges with 75 x 315-mm size.

GOURD—LUFFA SPONGE
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Coimbatore Long (Coimbatore Long White).—Characteristics: fruit 5–8” long, rind greenish-white to pale cream when mature, prolific; from southern India. Tindall, 1983.


Hybrid High Moon.—Vendor: Gurney’s. Characteristics: fruit bigger than most cultivars, rind white to jade green, flesh creamy, mild tasting, vigorous, extra early flowering. 1997.

Moonshine (F2).—Vendor: Peace Seeds. Characteristics: fruits 6” long weighing up to 1 lb, rind white, needs long growing season. 1990.

Taiwan Large.—Vendor: Sunrise. Characteristics: fruit with tapering blossom end, 6–12” long x 2–4” diameter, rind dark green. 1987.


GOURD—SECHIUM
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Broad Green.—Characteristics: large blocky fruit distinctively thickened around the middle, rind green, usually with distinct spines; from Puerto Rico. USDA Bulletin, 1901.

Long White.—Characteristics: generally large, oblong pyriform shaped fruit with numerous prominent ridges, rind white and wrinkled, usually with spines; from Puerto Rico. USDA Bulletin, 1901.

Oval Green.—Characteristics: large oval-shaped fruit, narrower than Broad Green, with pronounced grooves and ridges, rind green and smooth, without spines; from Puerto Rico. USDA Bulletin, 1901.

Pointed Green.—Characteristics: small elongated conical-shaped fruit, grooves relatively shallow, rind deep green with a granular surface, smooth or with a few small spines; from Puerto Rico. USDA Bulletin, 1901.

Round White.—Characteristics: small sub spherical fruit, rind white and smooth, usually without spines; from Puerto Rico. USDA Bulletin, 1901.

HERBS—PARSLEY
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KALE
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Premier.—Breeder: Virginia Agr. Expt. Sta. Characteristics: developed as open-pollinated selection out of Dwarf Siberian, appear-
ance is rape kale type, possibly B. napus, smooth, serrated leaves, deep green to blue-green color, long-standing kale, slow to bolt in the spring following fall planting. 1983.

Squire.—Breeder: Virginia Agr. Expt. Sta. Characteristics: developed as open-pollinated selection out of Vates kale, short stemmed, Scotch type kale, similar in appearance to Vates, although population is more uniform, very long standing, least likely cultivar to bolt after overwintering. 1990.


LEEK
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Porino.—Breeder: Nunhems. Vendor: Canners. Characteristics: late autumn and winter cropping, high frost resistance, very dark green leaves, 18–20 cm white stem.

Quickstar.—Breeder: Nunhems. Vendor: Canners. Characteristics: very uniform green type with strong leaf growth, easy to harvest.


LETTUCE
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Autumn Gold.—Breeder: E.J. Ryder. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, Vanguard x Empire, large frame and head, thick, bright green leaves, large rounded butt, better head shape than Empire, less spiraling, fewer pointed butts, tendency to be somewhat ribby, black seed. Resistance: bolting, tipburn, mosaic, tolerance to heat. Similar: Vanguard. 1987.


Blush.—Breeder: W. Waycott and E.J. Ryder. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, mini-size, dull dark green outer leaves slightly darker than Salinas parent, soft texture, leaf surface blistered, green pigment close to core, creamy yellow interior, tinge of red on the outer leaves, spherical to slightly flattened head, flat butt and ribs, small core, bases of leaves overlap well, black seed. Resistance: less prone to tipburn; susceptible to lettuce mosaic, cucumber mosaic, turnip mosaic, big vein, corky root rot, Sclerotinia. 1992.


Calrey.—Breeder: Univ. of California, Davis. Vendor: USDA, Univ. of California, Davis. Parentage: contains PI 91532 a downy mildew resistant Lactuca serriola introduction from Russia. Characteristics: crisphead type, dark glossy green, frame and outer wrapper leaves may be slightly bronze in color, firm, better weight than Calmar, smooth butt, good color, large cores, attractive, low seedstalk, white seed. Resistance: tipburn, downy mildew; susceptible to russet spotting. 1976.

Calrico.—Breeder: Univ. of California, Davis. Vendor: USDA, Univ. of California, Davis. Parentage: contains PI 91532 a downy mildew resistant Lactuca serriola introduction from Russia. Charac-
Crisphead type, head color medium to dark green, head solidity good, firmer than Calmar, butts have good color, large cores, attractive, seedstalk varies from medium to low, white seed. Resistance: downy mildew, tipburn, russet spotting. 1976.


**Cerise.**—Vendor: Johnny’s. Characteristics: crisphead type, medium green outer leaves heavily over-laden with a warm, shiny red color.


**Cool Breeze.**—Breeder and vendor: Asgrow. Characteristics: crisphead type, large frame, thick, large, smooth butt, medium ribs, black seed, dark green blistered leaves, well shaped heads, very uniform, large core, good color. Resistance: bolting, tipburn, pink rib, downy mildew pathotype 3; tolerance to frost. Similar: Cool Guard, Vanguard. 1991.

**Coolgreen.**—Vendor: Ferry-Morse. Characteristics: crisphead type, large head size, dark green from top to bottom of the head and well into the core, large core, flat butt. Resistance: downy mildew 3, tipburn. Similar: Vanguard.

**Coolwave.**—Breeder and vendor: Asgrow. Characteristics: crisphead type, 3–4 days earlier than Cool Guard, dark green color, firm, cover leaves for frost protection, very uniform. Similar: Cool Guard, Vanguard. 1990.


**Don Daniel.**—Breeder and vendor: Central Valley Seeds. Parentage: Vanguard 75. Characteristics: crisphead type, matures 4 to 6 days earlier than Vanmaxx types, medium to large frame, large round to flat head, leaf thickness same as Winterhaven, medium green, very impressive butt, ribs smooth with wide petioles, black seed. Resistance: bolting, tipburn, mosaics, big vein, downy mildew California pathovars 1, 2, 3. Similar: Vanguard. 1991.


**Fortuna.**—Breeder and vendor: Synergene. Characteristics: crisphead type, vigorous, large frame and head, thick crisp leaves, dark
glossy green, moderately well-covered head, ribby, large butt, wide shoulders on the butt, excess fertilizer and water may promote ribbiness and reduce firmness, dark brown seed. Resistance: tipburn, bolting in proper time slot; tolerance to frost. Similar: Great Lakes, 1989.


**Glacier.**—Breeder: E.J. Ryder and W. Waycott. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, dull, dark green outer leaves slightly paler than Salinas, green color extends close to the core, leaf margins mildly undulate, moderately dentate, strongly ruffled, texture soft, surface crinkled or blistered, outer leaves broader than long, creamy yellow interior, heads firm to hard, butt and ribs flat, black seed. Resistance: corky root; susceptible to bolting, lettuce mosaic virus and big vein. 1991.


**Green Pak.**—Breeder and vendor: Central Valley Seeds. Characteristics: crisphead type, matures 5–7 days earlier than Desert Queen or Empire, small to medium frame and head, very thick dark green leaves, butt similar to Empire, smooth ribs, white seed. Resistance: high heat, tipburn, bolting, frost, pink rib; tolerance to whitely. Similar: Empire. 1992.


**Ice Cube.**—Breeder: W. Waycott and E.J. Ryder. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, mini-sized, dull, dark green outer leaves slightly darker than Salinas parent, green pigment close to core, creamy yellow interior, black seed, head spherical to slightly flattened, flat butt and ribs, small core, bases of leaves overlap well, soft texture, leaf surface blistered. Resistance: tipburn; susceptible to lettuce mosaic, cucumber mosaic, turnip mosaic, big vein viruses, corky root rot, Sclerotinia. 1992.


**Kofa.**—Breeder and vendor: Synergene. Characteristics: crisphead type, large frame and head, heads well rounded and protected against frost by spiraling wrapper leaves, thick soft leaves, dark dull to glossy green, core relatively small, large butt, smooth ribs, dark brown seed. Resistance: tipburn; tolerance to frost. Similar: Vanguard. 1989.

**La Jolla.**—Breeder and vendor: Synergene. Characteristics: crisphead type, uniform, upright growth, moderate to large frame, large head, medium soft leaves, large butt, smooth ribs, Merit time slot in desert southwest United States, white seed. Resistance: bolting, pink rib, tipburn; tolerance to heat, frost. Similar: Calmar. 1986.

**Laguna.**—Breeder: Univ. of California, Davis. Vendor: USDA, Univ. of California, Davis. Characteristics: crisphead type, head is smaller than 24, firm, good butt appearance, good color, very large cores, low seedstalk, black seed. Resistance: downy mildew; susceptible to russet spotting. 1978.


**Little Caesar.**—Vendor: Burpee.

**Little Leprechaun.**—Breeder and vendor: ARCO/Dessert Seed Co. 1983.


**Misty Day.**—Breeder: E.J. Ryder and W. Waycott. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, dull, dark green outer leaves slightly more pale than Salinas, green color extends close to the core, leaf margins mildly undulate, moderately dentate, strongly ruffled, texture soft, surface crinkled or blistered, outer leaves broader than long, interior creamy yellow, heads firm to hard, flat ribs and butt, black seed. Resistance: corky root; susceptible to bolting induced by high temperature, lettuce mosaic virus, big vein. 1991.


**Mustang.**—Breeder and vendor: Coastal. Characteristics: crisphead type, medium to large frame and head, smooth ribs, black seed. Resistance: downy mildew California pathovars 1, 2A, 3; big vein. 1994.


Pacific.—Breeder: E.J. Ryder and Bert J. Robinson. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, dull, medium-dark green leaves, leaf margins similar to Salinas, interior creamy yellow, heads firm to hard at maturity and rounded, well-covered, occasionally spiraled, but is flat with broad-based overlapping leaves and large core, ribs less flat than Salinas, black seed. Resistance: big vein, downy mildew pathotype 1; susceptible to downy mildew pathotypes 2 and 3, lettuce mosaic and rib discoloration associated with high temperatures. Similar: Salinas. 1981.


Quechan.—Breeder and vendor: Shamrock. Characteristics: crisphead type, large frame, heads larger than Empire, smooth ribs. Resistance: bolting, pink rib, tipburn; tolerance to heat and frost. Similar to Empire.

Ramona.—Breeder: Univ. of California, Davis. Vendor: USDA, and Univ. of California, Davis. Characteristics: crisphead type, firm, but appearance good, seedstalk low, white seed. Resistance: tipburn symptoms vary between none, less than a trace. 1978.


Rico.—Breeder and vendor: Syngene. Characteristics: crisphead type, large to very large frame, large head, thick crisp dark green leaves, medium large but, smooth ribs, white seed, early plantings, excess fertilizer and water may promote extra large, wild, poorly headed plants, holds well under very cold, wet conditions and repeated frosts. Resistance: bolting, downy mildew California pathovar 1, frost; tolerance to heat. 1989.

Río Verde.—Breeder and vendor: Shamrock. Characteristics: crisphead type, medium to large frame and head, leaf color darker than Empire, smooth ribs and butt. 1995.

Rita.—Breeder: Univ. of California, Davis. Vendor: USDA, and Univ. of California, Davis. Characteristics: crisphead type, medium green, leaf margins of wrapper leaves have a smooth cabbage-like appearance, head size is 24, solid, good butt, smooth, large cores, low seedstalk. Resistance: possibly tipburn, probably contains PI 91532, downy mildew resistant Lactuca serriola introduction from Russia. 1978.


Rosalita.—Vendor: Johnny’s. Characteristics: cos type, deep red on inner exposed leaf surfaces, green outer base, early maturity, spring, fall, and winter crops. Similar: Rouge D Hiver.


Salinas.—Breeder: E.J. Ryder. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, dull green outer leaves, leaf margins scalloped or wavy, texture soft, creamy interior, firm to hard at maturity, spherical, slightly bald on top, adequately covered, bottom slightly flattened with flat ribs, leaves broad at base, core diameter medium to large, black seed. Resistance: tipburn; susceptible to downy mildew V8, lettuce mosaic, western yellows, and turnip mosaic viruses; Sclerotinia; sensitive to ethylene, russet spotting and pink rib. 1975.


Salinas 88.—Breeder: E.J. Ryder. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, dull green outer leaves, heads firm to hard at maturity and well rounded, green pigmentation extends close to core, interior creamy yellow, flat but and ribs, large core, leaf surface slightly crinkled, outer leaves are broader than long, black seed. Resistance: tipburn, tolerance to lettuce mosaic virus; susceptible to big vein and corky rot. Similar: Salinas. 1988.


Sea Green.—Breeder: E.J. Ryder. Vendor: USDA–ARS; Salinas, Calif. Characteristics: crisphead type, dull green leaves, interior is creamy, heads firm and well formed, core diameter medium to large, low to medium stem. Resistance: big vein; susceptible to downy...
mildew, lettuce mosaic and Sclerotinia. 1981.


**Thompson.**—Breeder: E.J. Ryder. Vendor: USDA, ARS; Salinas, Calif. Characteristics: crisphead type, medium dark green outer leaves, leaf margins dentate and texture is crisp, interior light cream, nearly white, heads firm to hard at maturity and well-covered, occasionally spiraled, butt is usually flat, occasionally rounded, leaves broad at base, ribs usually flat occasionally raised, core medium to large, white seed. Resistance: big vein; susceptible to downy mildew, tipburn, lettuce mosaic and Sclerotinia. 1981.


Vanguard 75.—Breeder: E.J. Ryder. Vendor: USDA–ARS, Salinas, Calif. Characteristics: crisphead type, large frame leaves tend to enclose the head, large, thick dull green leaves, broad flat butt, occasionally slightly pointed, smooth flat ribs, black seed, used widely for late spring harvest in desert southwestern United States since late 1970s; first variety with lettuce mosaic virus resistance. Resistance: bolting; tipburn; lettuce mosaic virus; tolerance to heat and frost. Similar: Vanguard. 1975.

Vega.—Breeder: Univ. of California, Davis. Vendor: USDA, Univ. of California, Davis. Characteristics: crisphead type, firm, good weight, smooth butt, large cores, attractive, low seedstalk, white seed. Resistance: susceptible to russet spotting, tipburn; contains PI 91532, downy mildew resistant *Lactuca serriola* introduction from Russia. 1978.


