



syngenta®

Active Greenhouse

CROP GUIDE

SYNGENTA VEGETABLE SEEDS

GLOBAL REACH, LOCAL FOCUS

At Syngenta Vegetable Seeds, we are dedicated to supporting our customers and partners around the world in this unique and complex industry. Our rich history in the vegetable seeds industry, strong presence in the market, and significant investment in the future of agriculture enables us to deliver high-quality vegetables all year round.

LEADERSHIP

Syngenta has more than **150 YEARS** of heritage in the **global vegetable seeds market** with roots dating back to 1867.

Our strong portfolio of more than **2,500 VARIETIES** in **30 CROP SPECIES** makes us **the partner of choice** for thousands of growers around the world.



Syngenta is a global market leader in seed production for:



Watermelon



Cauliflower



Sweet Pepper (Greenhouse)



Squash



Sweet Corn



Brussels Sprouts



Tomato Specialties

INNOVATION

We drive innovation to improve flavor, quality, convenience, and productivity for the benefit of growers, marketers, retailers, and consumers.



SWEETER
taste



FIRMER
flesh



NEW
specialty market
categories



BROADER
resistance
package



INVESTMENT

Growers continue to look for higher yields, more comprehensive disease resistance packages, adaptability, and flexibility. At Syngenta, we invest heavily in **research and development** to ensure we meet the **present and future** needs of our **growers and partners**.

230

NEW VARIETIES
launched globally every year

\$101.7M

INVESTMENT
in global R&D in 2019

\$4M

RECONSTRUCTION
of hurricane-damaged facilities in Naples, Florida

\$4M

EXPANSION
of R&D and seed production site in Woodland, California

LEADING THE WAY IN THE AMERICAS

We maintain research sites across the Americas, to help growers in different geographies get exactly what they need.



Acquisition of **Abbott & Cobb** seed company in 2018 **increased Syngenta's ability to innovate** and further enhance offer to growers



Full Count® transplant program **revolutionized watermelon production**, with more than one billion plants sold as of 2019

*These are shared R&D vegetable seed sites

Leading the Tomato Seed Production Industry with Good Seed and Plant Practices

The first site in North America to receive Good Seed and Plant Practices (GSPP) accreditation, the Syngenta Pasco plant is uniquely positioned to provide healthier, better and safer seeds for the production of active greenhouse vegetable plants and for the entire active greenhouse value chain. GSPP is a hygiene and prevention system that significantly reduces the risk of infection by *clavibacter michiganensis* (Cmm), dangerous and persistent bacteria that can cause serious economic damage and are easily spread through plant handling, cropping, grafting and other host plants, even though infected plants may remain symptomless.

GSPP gives growers the assurance that all GSPP-participating seed companies are continuously upgrading their infrastructure and processes with state-of-the-art technology in order to reach the ultimate level of hygiene measures and minimize the Cmm infection risk. Together with market chain partners and other leading active greenhouse vegetable seed companies, Syngenta continually works to develop new ways to keep active greenhouse vegetables healthy.



Superior greenhouse tomatoes



Duelle

- High yield potential red grape tomato
- High flavor profile with crunchy texture
- Labor-friendly crop and clusters



Sweetelle

- Generative plant provides constant fruit setting with balanced growth and minimal fruit drop
- High tolerance against micro-cracking
- Balanced flavor profile and excellent shelf-life to drive retail and grower demand



Dunne

- Mini San Marzano tomato with excellent flavor and enhanced eating experience
- Medium maturity plant produces small, cylindrical fruit
- Suitable for use in a cluster harvest
- Ideal for stand alone pack or as part of a medley



Bamborange

- High yield potential with a fruit weight of 12-13 grams
- Semi-compact plant type
- Good flavor and high Brix



Ivorymoon

- Exceptional and unique color
- Reliable yield level in this segment
- Strong plant



Nebula

- Light red, loose cherry tomato with fruits from 14-16 grams
- Excellent, unique flavor with distinctive aroma and crunchy bite
- High fructose to glucose ratio
- Strong, vegetative plant type

Superior greenhouse tomatoes



Bullseye

- High-yielding variety with very large fruit size and good quality
- Large, high round fruit
- Strong plant helps maintain fruit size



Climstar

- Attractive, jointless, flattened, round fruits
- Firm fruits with good stem shelf-life
- Dense cluster tomato with 5 fruits from 140 to 160 grams
- Flat cluster shape, ideal for pruning
- Strong, generative plant type with sufficient leaf length in summer and good, consistent setting
- Intermediate oidium resistance
- High production potential



Growdena

- Produces large fruit
- High yields of uniform, firm fruit
- Good fruit set in summer
- Vigorous, open plant keeps very good leaf length, even under stressful growing conditions



Altadena

- High yield potential beefsteak tomato
- Yield improvement over Bigdena
- Good plant vigor



Topanga

- Consistently produces large, uniform fruits with high tolerance to micro-cracking
- Firm, deep red fruit with excellent shelf life
- Consistent plant vigor with high tolerance to stress conditions
- Dark green cluster stem maintains fresh look



Kardia - rootstock

- Strong, generative rootstock with good early balance
- Excellent results with both small and large fruit scions
- Highly suitable for vegetative hybrids and vegetative/moderate growing conditions

Technical data: tomato

| Variety | Plant characteristics | Fruit characteristics | Fruit color | Approx. weight at trial (g) | Disease resistance |
|-------------------------------------|------------------------------|---|----------------------------------|-----------------------------|--|
| BEEF | | | | | |
| Altadena | Vigorous | Dark green and deep red, flat-round fruits without ribbing | Red | 275 - 300 | HR: Ff: A-E / Fol: 0-1 (US1-2) / Va, Vd / TMV: 0 / ToMV: 0-2 |
| Growdena | Vigorous | Flattened; large beef with uniform, firm fruit and good shelf-life | Red | 220 - 240 | HR: Ff: A-E / Fol: 0-1 (US1-2) / For / TMV: 0 / ToMV: 0-2 / V (Va: 0, Vd: 0) |
| GRAPE | | | | | |
| Bamborange (311457R) New Variety | Vigorous | Elliptic; attractive fruit shape, color and flavor | Orange | 12 - 13 | HR: Ff: A-E / Fol: 0-1 (US1-2) / Va, Vd / TMV: 0 / ToMV: 0-2 |
| Canelo | Vigorous | Elliptic; snacking usage; attractive fruit shape, color, firmness and shelf-life | Orange | 10 - 12 | HR: TMV: 0 / ToMV: 0-2 IR: Ma / Mi / Mj |
| Duelle (T316144) New Variety | Generative | Elliptic; two locules; snacking usage; highly productive | Shiny red | 10 - 12 | HR: A-E / Fol: 0 (US1) / TMV: 0 / ToMV: 0-2 IR: On / Ma / Mi / Mj |
| Sweetelle | Generative | Elliptic; small size; two locules; for single harvest; snacking usage | Red | 10 - 12 | HR: Ff: A-E / Fol: 0 (US1) / ToMV: 0-2 IR: Ma / Mi / Mj |
| CLUSTER | | | | | |
| Bullseye | Vigorous | High, round fruit with big size (>160 g/fruit) | Red | 150 - 170 | HR: Ff: A-E / Fol: 0-1 (US1-2) / For / V (Va: 0, Vd: 0) / TMV: 0 / ToMV: 0-2 |
| Climstar | Balanced | Circular; dense, flat cluster tomato with attractive, jointless, firm fruits and good stem shelf-life | Red | 140 - 160 | HR: Ff: A-E / Fol: 0 -1 / For / TMV: 0 / ToMV: 0-2 / V (Va: 0, Vd: 0) IR: On |
| Ivorymoon (T313214) New Variety | Vigorous | Smooth, high-round grape-size fruits | Ivory to light yellow | 10 | HR: TMV: 0 / ToMV: 0-2 / IR: Ma / Mi / Mj |
| Topanga | Vigorous | Circular; large cluster of 5 fruits; deep red color with great firmness | Red | 140 - 160 | HR: Ff: A-E / Fol: 0-1 (US1-2) / ToMV: 0-2 / V (Va: 0, Vd: 0) IR: For |
| SPECIALTY | | | | | |
| Dunne | Balanced | Cylindrical, mini-cluster oval, mini San Marzano type for protected culture; good for pack or medley | Red | 20 - 25 | HR: Fol: 0-1 (US1-2) / ToMV: 0-2 IR: Ma / Mi / Mj |
| Nebula | Strong, vegetative | Round and crunchy | Light red with a touch of orange | 14 - 16 | HR: For / Pst / ToMV: 0-2 / Fol: 0 (US1-2) / V (Va: 0, Vd: 0) / Ff: A-E IR: Ma / Mi / Mj |
| ROOTSTOCK | | | | | |
| Kardia | Strong, generative influence | N/A | N/A | N/A | HR: Fol: 0 (US1), Fol: 1 (US2) / For / V (Va: 0, Vd: 0) / ToMV: 0-2 IR: PI / Ma / Mi / Mj |

Disease abbreviation key

| | | | | | |
|------------|--|-------------|---|-----------|--|
| Ff | Leaf mold caused by <i>Fulvia fulva</i> | Mj | Root knot caused by <i>Meloidogyne javanica</i> | V | Verticillium wilt caused by the specified race of <i>Verticillium albo-atrum</i> , <i>V. dahliae</i> |
| Fol | Fusarium wilt caused by the specified races of <i>Fusarium oxysporum</i> f. sp. <i>lycopersici</i> | On | <i>Oidium neolycopersici</i> (ex <i>Oidium lycopersicum</i>) | Va | Verticillium wilt caused by the specified race of <i>Verticillium albo-atrum</i> |
| For | Fusarium crown and root rot caused by <i>Fusarium oxysporum</i> f. sp. <i>radicis-lycopersici</i> | Pst | Stewart's wilt caused by <i>Pantoea stewartii</i> (= <i>Erwinia stewartii</i>) | Vd | Verticillium wilt caused by the specified race of <i>V. dahliae</i> |
| Ma | Root knot caused by <i>Meloidogyne arenaria</i> | ToMV | Mosaic caused by tomato mosaic virus | HR | High resistance |
| Mi | Root knot caused by <i>Meloidogyne incognita</i> | TMV | Mosaic caused by tobacco mosaic virus | IR | Intermediate resistance |

High-quality peppers for active greenhouses

New Variety



Francelia

- Deep red, blocky XL to XXL fruits
- Early maturing variety
- Compact crop type leads to faster coloring of fruits
- HR: Tm: 0-2



Gina

- Blocky, uniform XL fruit with thick walls
- Easy-setting plant
- Strong against blossom end rot
- HR: Tm: 0-3
- IR: Lt



Felicitas

- Uniform blocky fruit with dark red color
- XL to XXL fruit size
- High quality fruit with stable plant structure
- Vigorous plant with good leaf coverage
- HR: Tm: 0-2
- IR: Lt



Kathia

- Higher marketability in summer than competitive pepper varieties
- Easy setting plant
- Consistent shape and quality
- HR: Tm: 0-3
- IR: Lt



Orangela

- Plant with medium vigor, easy setting variety with high-quality fruit
- Flavorful variety with an attractive blocky shape and color
- HR: Tm: 0-2



Conga

- Very large, uniform fruit size with high quality appearance and attributes
- Well-balanced plant habit with powerful vigor and consistency throughout the season
- High yield potential of excellent, yellow, high quality fruit with larger size than market competitor
- HR: Tm 0-3

Technical data: pepper

| Variety | Plant characteristics | Fruit characteristics | Fruit color | Approximate size at trial | Disease resistance |
|---------------------------------|-------------------------------|--|-------------|---------------------------|-------------------------------------|
| BELL | | | | | |
| Conga | Balanced, strong vigor | Sweet, blocky | Yellow | XXL to XL | HR: Tm: 0-3 |
| Felicitas | Vigorous, stable plant | Blocky | Red | XXL to XL | HR: Tm: 0-2 IR: Lt |
| Francelia New Variety | Vigorous, stable plant | Blocky | Red | XXL to XL | HR: Tm: 0-2 |
| Gina | Easy setting, stable plant | Blocky with thick walls | Red | XL | HR: Tm: 0-3 IR: Lt |
| Kathia | Easy setting, stable plant | Uniform shape | Orange | XL | HR: Tm: 0-3 IR: Lt |
| Orangela | Easy setting, long internodes | Uniform fruit shape with excellent color | Orange | XL | HR: Tm: 0-2 |

Disease abbreviation key

| | | | |
|-----------|--|-----------|-------------------------|
| Lt | Powdery mildew caused by <i>Leveillula taurica</i> | HR | High resistance |
| Tm | Mosaic caused by tobamovirus pathotype | IR | Intermediate resistance |

In cases where specific races or strains are not noted, the variety is resistant to some, but not necessarily all known races or strains of the pathogen. For complete disease resistance information, please visit www.SyngentaUS.com/vegetables.



Quality cucumbers for the greenhouse



Elsie

- Long Dutch variety with nice ribbing and very high yield potential
- Suitable for both high wire and umbrella growing systems
- High resistance to Powdery Mildew and strong against CGMMV
- Labor friendly plant type

Monroe

- Generative plant that flowers and sets easily
- Consistent fruit throughout the fall and winter growing seasons
- Excellent color and ribbing
- Fruit fills out well at the tips, reducing appearance of “bottle neck”
- Easy crop management, results in labor cost savings
- Multiple, high quality fruit on lateral branches



Technical data: cucumber

| Variety | Plant characteristics | Segment | Average fruit length (cm) | Disease resistance |
|-----------------|------------------------|----------------------|---------------------------|--|
| CUCUMBER | | | | |
| Elsie | Strong, open plant | Spring/Summer/Fall | 30 - 35 (12 - 14 in) | HR: PM / CGMMV IR: CMV |
| Monroe | Generative; open plant | Winter/ Spring/ Fall | 30 - 35 (12 - 14 in) | HR: Cca / Ccu IR: Gc / Px |

Disease abbreviation key

| | | | | | |
|--------------|--|-------------|--|-----------|---|
| Cca | Corynespora leaf spot caused by <i>Corynespora cassicola</i> | CMV | Cucumber mosaic virus | PM | Powdery mildew |
| Ccu | Scab and gummosis caused by <i>Cladosporium cucumerinum</i> | CVVY | Cucumber vein yellowing virus | Px | Powdery mildew caused by <i>Podosphaera xanthii</i> (ex <i>Sphaerotheca fuliginea</i>) |
| CGMMV | Cucumber green mottle mosaic virus | Gc | <i>Golovinomyces cichoracearum</i> (ex <i>Erysiphe cichoracearum</i>) | HR | High resistance |
| | | | | IR | Intermediate resistance |





For more information, visit www.SyngentaUS.com/vegetables



PLANTPRODUCTS[®]

To learn more about Syngenta greenhouse vegetable varieties, contact Plant Products at (519) 326-9037 or info@plantproducts.com

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For complete disease resistance information, please visit www.SyngentaUS.com/vegetables.

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