



# 2024 CATALOG

US & CANADA

[usa.vitalisorganic.com](http://usa.vitalisorganic.com)

# Product Index

## Organic Certification

100% CERTIFIED ORGANIC

All of our seed, seed processing and seed treatments are 100% certified organic complying to national and international standards. Vitalis Organic Seeds organic certificates and non-GMO statement can be found on the About Vitalis page of our website [www.vitalisorganic.com](http://www.vitalisorganic.com).



### USDA NOP

We are certified as a handler for the National Organic Program (NOP) of the United States Department of Agriculture (USDA) with certifier CCOF under Client Code pr1831. We are enrolled in the CCOF Global Market Access Program in compliance with the NOP/COR (Canada Organic Regime) Equivalence Arrangement and the US/EU & UK Equivalence Arrangements Equivalent to (EC) No 834/2007 and (EC) No 889/2008.

Skal



### EKO

For the European and other select international markets our vegetable seeds are certified in compliance with EC No 834/2007 // Certificate number 1541650 \ NL-BIO-01 Regulation by Skal under number 014978.



### Lacon

For the European and other select international markets our herb seeds are certified in compliance with the EC No 10035 Regulation by Lacon under certificate number DE-RP-003-00029-BCD#2020#83837-EN.



Arugula .....	14
Cucumber .....	20-22
Eggplant .....	34
Endive .....	15
Fennel .....	18
Herbs .....	39-40
Leek .....	16
Lettuce .....	1-13
Melon .....	34
Onion .....	17
Pepper .....	29-32
Radish .....	18
Rootstock .....	33
Summer Squash .....	37-38
Tomato .....	23-28
Watermelon .....	35-36
Winter Squash .....	38
Customer Service .....	46
Contacts .....	48
Resistances .....	41-45



## Vitalis Organic Seeds, the organic division of Enza Zaden, is the global leader in organic seed production and breeding.

Vitalis offers more than 200 certified organic varieties of vegetables and culinary herbs, all screened at research stations, in Myakka, Florida, San Juan Bautista, California, and Culiacan, Mexico. A global leader in organic seed breeding and in improving industry standards for nearly three decades, Vitalis believes organic food begins with organic seed. Integrity in organic seed and food systems is what fuels our commitment to organic agricultural programs and to growers, producers and consumers across North America.

The Vitalis Organic Seeds USDA Organic certificates and non-GMO statement can be found on our website:

<https://usa.vitalisorganic.com/about-vitalis>

## At Vitalis Organic Seeds, we believe in creating an organic world together. We are proud to work closely with the following partners:



Check out our website for more regional events: <https://usa.vitalisorganic.com/about-vitalis/events>

# Lettuce



## ICEBERG



### Paonia

Paonia is an adaptable iceberg that has performed well in trials across the country. The variety is fast to mature to a medium size head with excellent internal fill. Paonia has a high round shape, small core and V-shaped base, which allows for ease of harvest and helps to prevent basal rot. Adaptable for fresh market production and processing.

**Resistances:** HR: BI:16-29,31,32,34,36EU/BI:1-9US/Nr:0/Pb/TBSV. | IR: SS.

## GREEN BUTTERHEAD



### Milagro

Milagro is a medium green butterhead with nice leaf gloss, a large frame and impressive weight that is ideal for processing. The large cap leaf and semi-filled top also make this variety compatible for carton packs. With good flexibility for full season production and improved mildew resistance, Milagro offers solid performance for multiple applications.

**Resistances:** HR: BI:16-35,37EU/BI:1-9US/Nr:0/TBSV. | IR: LMV:1.

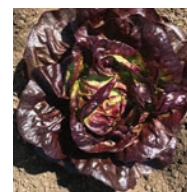
## RED BUTTERHEAD



### Alkindus

Alkindus has slightly savoyed leaves and excellent mildew and red aphid resistance. With a medium head size, Alkindus has a beautiful dark red color and is suitable for full season production. Excellent fill and good field holding capacity.

**Resistances:** HR: BI:16-26,28,32EU/BI:1-9US/Nr:0/TBSV. | IR: LMV:1.



### Marciano

Our newest red butterhead has been a standout in trials thanks to its impressive disease package, especially downy mildew resistance. Marciano is a more compact variety with good internal fill. Outer leaves are smooth, with an eye-catching deep burgundy red color, and contrast beautifully with the fresh green interior.

**Resistances:** HR: BI:16-36EU/BI:1-9US/Nr:0/TBSV. | IR: LMV:1.

## GREENLEAF



### Bergam's Green

A large framed traditional greenleaf with dark green color. Bergam's Green is a widely adapted variety. It is slow to bolt, strong against tipburn, resistant to heading and suitable for year-round production.

**Resistances:** HR: TBSV. | IR: Ss.



### Muir

Muir is a medium-sized, light green and slow-growing Batavia type. The heads grow very upright and the hearts are well filled. Muir has a sweet flavor and is strong against bolting and internal tipburn. With excellent downy mildew and red aphid resistance, this multi-use variety is appropriate for open field and hydroponic production.

**Resistances:** HR: BI:16-26,28,32EU/BI:1-9US/Nr:0/TBSV. | IR: LMV:1.

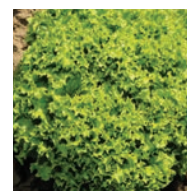


### Tropicana

Proven to be the best heat and bolt tolerant greenleaf variety in its class in trials across the country. Tropicana is tolerant to tipburn and leaf scorching, and is Corky Root resistant. With excellent uniformity and leaf texture, Tropicana can be used in fresh packs or for whole leaf production.

**Resistances:** IR: Ss.

## LOLLO BIONDA



### llema

llema is an impressively voluminous green lollo, with a strong plant and nice leaf curliness. llema has a unique combination of fast growth, good weight, field holding capacity and very sweet flavor. Adaptable to open field and hydroponic growing conditions.

**Resistances:** HR: BI:16-33EU/BI:1-9US/Nr:0/Pb/TBSV. | IR: LMV:1/Fol:1.



# Lettuce



Variety	Full Size Heads	Hearts	Processing	Spring	Summer	Autumn	Winter
Adicamp	✓	✓		N/C			
Coastal Star	✓		✓	N	N	N	
Jara		✓		S		S	
Mezquite		✓	✓	N		N	S
Rainier	✓		✓	N/C/S		N/C	

REGION: N=Northern (winter freeze) S=Southern (mild winters) C=Coastal (moderate year-round)  
For more specific growing recommendations, contact your regional Vitalis representative.

# Lettuce

## GREEN ROMAINE



### Adicamp

Adicamp is a spring season romaine for hearts production. This variety forms well-filled, hefty hearts with straight ribs and a high leaf count. Adicamp is early to fill and also works as a carton variety because of a smaller frame, wide base and excellent weight. Leaves are medium green and savoyed.

**Resistances:** HR: Bl:16,18-37EU/BI:1-9US/Nr:0/Pb/TBSV. | IR: Ss.



### Coastal Star

Coastal Star is a well-loved romaine with dark green color and tall stature. The variety matures early and produces large, heavy heads that can be used for hearts or fresh pack. Widely adaptable, Coastal Star can be grown spring through fall in most regions.

**Resistances:** IR: Ss.



### Jara

Jara produces top quality hearts with a high level of disease resistance, especially against downy mildew. This romaine is well-suited for front and tail-end production in the desert Southwest.

**Resistances:** HR: Bl:16-36EU/BI:1-9US/Fol:1,4/Nr:0/TBSV.



### Mezquite

A semi-savoy romaine with thick texture, a tapered base and straight ribs. Works well for the heart market, and the nice internal blanching provides an attractive product for the value-added segment. Performs best when planted in October through November in the desert Southwest region, and in the spring and fall slots in Northern regions.

**Resistances:** Bl:16-32,34,36EU/BI:1-9US/Fol:4/Vd:1. | IR: Fol:1.



### Rainier

Rainier is a large green romaine for full size heads and fresh cut processing. The variety has an impressive disease package, including improved resistance to downy mildew, Tomato Bushy Stunt Virus (TBSV) and red aphid. Recommended for spring and fall production.

**Resistances:** Bl:16-27,29,30,32,33EU/BI:1-8US/Fol:4/Nr:0/TBSV. | IR: Ss.



# Mini Head Lettuce



## GREEN OAKLEAF



### Bauer

Introducing Bauer, an emerald green oakleaf mini head. Like its namesake, long-time organic farmer and seedsman John Bauer, this one-of-a-kind variety will win you over immediately. Bauer has a compact habit with excellent fill, offering harvest flexibility at multiple sizes. Leaves are thick, crunchy and sweet. Consistent with our full Vitalis assortment, Bauer has been selected under organic conditions and is widely adaptable, with the highest level of downy mildew resistance.

**Resistances:** HR: BI:16-37EU/BI:1-9US/Nr:0/TBSV. | IR: LMV:1.

## GREEN MINI ROMAINE



### Xalbadora

A mini romaine with great fill, dark green color and high gloss. Xalbadora does well against tip burn and downy mildew, and is widely adaptable for full season production. More upright habit and slightly faster filling than Starhawk, which it replaces.

**Resistances:** HR: BI:16-36EU/BI:1-9US/Nr:0/TBSV | IR: LMV:1.

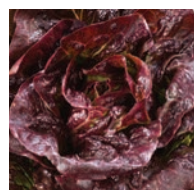
## RED MINI ROMAINE



### Breen

Breen is a unique red mini romaine, which closes nicely in the top, resulting in a perfectly formed heart. This great-tasting variety resembles a Treviso radicchio in appearance, and has light colored veins that provide an attractive contrast with the reddish-brown leaves, and has excellent shelf life.

**Resistances:** HR: BI-EU:16-21,23-26,28-37/BI-US:1-9/Fol:4.



### Pomegranate Crunch

This variety is a red mini romaine with an open habit and smooth texture. Faster growing than other red romaine varieties, with a brilliant poppy red color on the outside and a speckled red-green interior. Pomegranate Crunch pairs well with a solid green mini romaine variety for an attractive presentation.

**Resistances:** HR: BI:16-27,29,32,34,36EU/BI:1-8US/TBSV.



## GREEN LITTLE GEM



### Dragoon

Dragoon is a well-filled compact little gem. This compact variety has dark green, semi-savoy outer leaves, matures slowly and keeps a short core. It is strong against bolting and internal tipburn, and is appropriate for open field or unheated greenhouse production.

**Resistances:** HR: BI:16-27,29,32,34,36EU/BI:1-8US/Nr:0/TBSV. | IR: LMV:1.



### Newham

Newham is a smooth-leaved green little gem with red aphid resistance in the Spretnak class. Excellent fill, strong tipburn resistance and a very sweet flavor make this variety a standout. Suitable for year-round production in coastal regions, and spring, fall, and winter production in hotter areas.

**Resistances:** HR: BI:16-21,23-26,28-37EU/BI:1-9US/Nr:0/Pb. | IR: LMV:1/Ss.



### Spretnak

A beautiful and tasty little gem with compact, well-closing heads, smooth outer leaves and tightly packed, blanched hearts. Best for spring and fall cultivation, with strong field tolerance to downy mildew.

**Resistances:** HR: BI:16-21,23-26,28-37EU/BI:1-9US/Fol:1,4/Pb.

## RED LITTLE GEM



### Truchas

A little gem / mini-romaine type that provides a stunning contrast between green hearts and dark cherry red leaves. The upright cylindrical shape, good uniformity and ease of cleaning make this an excellent complement to the Vitalis green little gem assortment.

**Resistances:** HR: BI:16-26,28-37EU/BI:1-9US/TBSV. | IR: LMV:1.



# Lettuce



**With eight one-cuts that are easy to grow, harvest, process, store and enjoy, there's an Eazyleaf for everyone at Vitalis Organic Seeds.**

All of our Eazyleaf varieties offer strong disease resistance, flexibility for year-round production, good field holding, uniform leaf size and quality regrowth on the second cut. Whether you are growing for full heads or mixed blends, our Eazyleaf varieties offer great diversity of leaf shapes, stunning colors including brilliant greens and dark reds, and superior texture and loft to ensure beautiful presentation at farmers' markets, in grocery store clamshells, or in your personal salad bowls at home.



## GREEN TANGO



### Ezpark

Ezpark is our newest green tango, featuring a deep emerald color and excellent loft. Impressive yield combined with good field holding ability make this variety an easy choice for year-round production.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0. | IR: LMV:1.



### Ezrilla

Ezrilla is a fast-growing green tango with attractively serrated, medium green leaves and a narrow cutting surface. This variety is recommended for adding texture, loft and crunch to the salad mix. Strong disease resistance and slow bolting make Ezrilla an adaptable variety throughout the year in most regions.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0/TBSV. | IR: LMV:1.

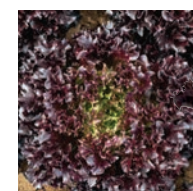


### Eztron

A vivid green tango variety with superior texture and a flavorful crunch. Leaves are deeply incised with a fine super-frilled outer edge, creating a unique product with amazing volume and loft. Eztron has intermediate speed, with improved bolting tolerance.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0/TBSV. | IR: LMV:1.

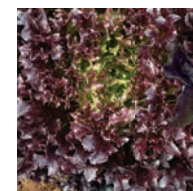
## RED TANGO



### Burgandy

Deeply incised leaves, crunchy texture and good volume make Burgandy a nice complement to our green tango assortment. The leaves of this red tango have a narrow attachment, with medium red outer leaf color accenting a vivid green interior.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0. | IR: LMV:1.



### Ezflor

Ezflor is an attractive Eazyleaf with a dark glossy red color and a unique leaf shape that can be used as a red tango or redleaf type. This variety maintains excellent texture and quality, even under water stress and multiple harvests.

**Resistances:** HR: Bl:16-37EU/Bl:1-9US/Fol:1,4/Nr:0/TBSV.



### Rhone

Our most strongly incised red tango, Rhone is a great addition to the Eazyleaf assortment. This variety offers a crunchy texture, narrow leaf attachment, excellent bolt tolerance and an attractive red and green color contrast.

**Resistances:** HR: Bl:16-33EU/Bl:1-9US/Nr:0.



# Lettuce



## REDLEAF



### Brentwood

Brentwood is a lobed, deep red glossy lettuce with a glossy, softer texture and a lot of dimension. The color contrast between the dark cherry and bright light green gradation on the leaf is striking. This variety has excellent bolt tolerance and produces leaves with a fine ripple. Good for mini head or one-cut harvest.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0. | IR: Fol:1.

## GREEN OAKLEAF



### Hampton

Hampton is a voluminous, high leaf count, one-cut oakleaf. With dark, shiny, green leaves that have a narrow attachment, this variety is ideal for mechanical or hand harvest. Very slow to bolt, Hampton is a flexible variety for year-round production.

**Resistances:** Bl:16-37EU/Bl:1-8US/Nr:0/TBSV. | IR: LMV:1.





# Lettuce



**Controlled Environmental Agriculture (CEA) is a collective term for indoor growing that leverages technology, engineering and plant science to optimize growing systems, plant quality and production efficiency.**

As early leaders in this area, Vitalis has a dedicated CEA team on the ground, an established greenhouse lettuce portfolio, and a highly collaborative breeding approach that involves extensive trialing under the precise conditions of each grower's system. Working together with growers is how we're helping to move the compelling frontier of CEA forward.

## GREEN CRISP



### Cristabel

Frilled ice lettuce leaf type with dark green color and very strong, thick leaf texture. Short core with more upright growth, this variety is high yielding. Reliable in various conditions.

**Resistances:** HR: Nr:0/TBSV. | IR: Fol:1.



### Crispenza

Crispenza is an incised crispy variety with excellent yield potential, attractive straight veins and good bolting tolerance. The variety is resistant to tipburn and demonstrates a strong root system that keeps the plant healthy even in the presence of water-borne pathogens.

**Resistances:** BI:16-36EU/BI:1-9US/Nr:0/TBSV.

## GREEN BUTTERHEAD



### Casey

A fresh, medium green colored butterhead for indoor production under long daylength. Casey is medium-fast maturity and yields jumbo sized heads with excellent weight. It has a flat, clean, closed base and a strong disease resistance package. Strong roots and good heat tolerance make Casey a great choice for summer production.

**Resistances:** HR: BI:16-37EU/BI:1-9US/Nr:0/Pb.



### Fairly

Fairly is a greenhouse butterhead variety for the long day season. Its fast growing heads have excellent weight and the closed, flat base makes it an easy variety to clean at harvest. This variety has a large frame, fine ribs and a fresh, medium green color.

**Resistances:** HR: BI:16-34,36EU/BI:1-8US/Nr:0/TBSV.

## GREEN INCISED

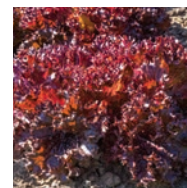


### Green Reef

Green Reef is a fast-growing variety, producing upright heads that are flexible and compact. Highly serrated green leaves have a thick texture and narrow attachment. With excellent production, this variety works year-round for whole head or one-cut harvests.

**Resistances:** HR: BI:16-37EU/BI:1-9US/Nr:0/Pb/TBSV.

## LOLLO ROSSA



### Azirka

Azirka is a triple red Lollo type that has a very thick, crunchy leaf with nice flavor and excellent red color penetration. The leaf is rounded with a very good three-dimensional structure. This variety also works well in trios.

**Resistances:** HR: BI:16-36EU/BI:1-9US/Nr:0/TBSV. | IR: LMV:1.

# Babyleaf



## GREEN OAKLEAF



### Clearwater

A medium-dark green oakleaf with thick, pliable texture and good flavor. Deeply lobed leaves maintain a narrow attachment and three dimensional quality to increase volume.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0/TBSV. | IR: LMV:1.

## GREENLEAF



### Celinet

A greenleaf with a narrow cutting surface, good leaf flexibility and attractive frilled leaf margin. Celinet grows slowly, which allows for a longer harvest window.

**Resistances:** HR: Bl:16-36EU/Bl:1-9US/Nr:0/TBSV. | IR: LMV:1.

# Arugula

## WILD ROCKET (*DIPLLOTAXIS TENUIFILIA*)



### Bellezia

Bellezia has an elegant look, with a striking dark color and uniform, highly serrated leaves. Intermediate resistance to downy mildew and excellent shelf life.

**Resistances:** IR: Hp.



### Jolizia

The newest variety in our assortment, this thick-textured wild arugula has a very dark color, good uniformity and intermediate resistance to downy mildew.

**Resistances:** IR: Hp.



### Letizia

Letizia has intermediate resistance to downy mildew and exceptionally thick-textured, smooth, medium-green, lobed leaves.

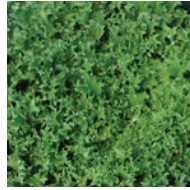
**Resistances:** IR: Hp.

Variety	Speed	Leaf Shape	Leaf Color	Bolting Tolerance
Bellezia	Slow to Moderate	Highly Serrated	Dark Green	Low
Jolizia	Slow	Highly Serrated	Dark Green	Medium
Letizia	Slow to Moderate	Lobed	Medium Green	Medium



# Endive

## CURLY



### Curlesi

Curlesi is a newer addition to our endive assortment, providing strong filling during warm season conditions and with good tolerance to tipburn. This adaptable variety has a vigorous upright habit, compact frame and is well-suited for the fresh market.

## ESCAROLE



### Eliance

Eliance has a compact frame and strong bolting tolerance that is well-suited for summer and fall production. Inner leaves are long and flexible, which allows for impressive self-blanching. Characteristic of the full Vitalis endive assortment, Eliance has an upright structure which minimizes basal rot and allows for ease of harvest.

## TRES FIN



### Benefine

An impressive tres fin type with a shiny, dark green exterior color and well-balanced interior. Benefine has compact, upright, tightly filled heads that are strong against bolting. Suitable for growing in warm conditions, Benefine has impressive resistance to tipburn and produces high yields of nicely frilled leaves.

Type	Variety	Spring	Summer	Autumn
Curly	Curlesi	N/S/C	N/C	N/S/C
Smooth	Eliance	S/C	N/C	N/S/C
Tres Fin	Benefine	N/S/C	N/C	N/S/C

REGION: N=Northern (winter freeze) | S=Southern (mild winters) | C=Coastal (moderate year-round)

# Leek



### Chinook F1

Chinook is a fast growing summer hybrid with exceptionally long, straight shanks that clean easily in the field. This variety has excellent uniformity and grows quickly even under cold conditions. Plants are medium green and upright. An excellent choice for reliable, high-quality, early season leeks.



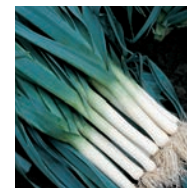
### Comanche F1

A main season hybrid producing leeks with long shanks that are easy to peel. Comanche has dark green foliage and an upright habit. This adaptable variety has a flexible harvest window and can be marketed loose, in bunches or in cello packs.



### Oslo F1

Our latest maturing leek, Oslo is a late fall and early winter variety with upright, dark blue leaves and a stocky shank that is easy to peel. This variety performs very well as an over-wintered leek, with impressive bolting tolerance.



### Tadorna

Tadorna is a well-loved open pollinated standard for organic growers. This autumn-winter leek is uniform and can fit into most leek programs, given its adaptability to multiple growing regions. Tadorna has long white shanks and is easy to harvest and clean.

Variety	Leaf Color	Early	Main	Autumn	Winter
Chinook F1	Medium Green	✓	✓		
Comanche F1	Dark Green		✓	✓	
Oslo F1	Dark Blue			✓	✓
Tadorna	Blue-Green			✓	✓

HR: High resistance | IR: Intermediate resistance  
For explanation of codes of resistances, see pages 41-45



# Onion



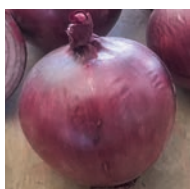
## INTERMEDIATE DAY



### Monastrell F1

Monastrell is an intermediate day onion that boasts high quality, single-centered bulbs. Plants are upright and strong against disease. Monastrell has an impressively dark red color and a round to slightly flat shape. Bulbs are uniform and resistant to sunscald in the field. Interiors have excellent internal ring color development. This variety matures slightly later than Cabernet and is larger in size, averaging 3.5-4.0 in. (8.9-10.2 cm). Recommended for fresh market, bulbs will store 4-6 months.

## LONG DAY



### Tannat

Tannat is a dark red, medium to late maturing long day onion with excellent exterior and interior color. Tops are large, giving Tannat the opportunity to make larger red bulbs. Root system is vigorous showing good tolerances to both Pink Root and Fusarium. Expected storage is 4 to 8 months.

# Radish



### Pearl

A white, smooth, round radish with a small green neck for open field production. Pearl has very vigorous growth and good resistance to cracking. It is adaptable as a processing radish in cello bags or in fresh bunches, due to its strong tops. This variety shines when mixed with red round radishes.

# Fennel



### Preludio F1

Preludio is an early variety with good bolting tolerance. It produces uniform, round bulbs of standard quality and yield. Compact plants are very upright and bulbs have a narrow cutting surface for ease of harvest. With succession plantings, Preludio can be successfully harvested in spring, summer and early fall.



# Cucumber



## AMERICAN SLICER



### Corinto F1

An adaptable slicer variety that sets well under cool conditions. This variety is very productive and produces cylindrical, dark green, shiny, smooth fruit of 8-10 in. (20-25 cm) in length. The excellent disease resistance package makes this variety a great choice for both open field and unheated greenhouse production.

**Resistances:** IR: CMV/CVYV/Px.



### Paraiso F1

Paraiso is a very flexible variety adapted to varying growing conditions. The plant is vigorous and produces well in cold conditions. Fruits average 8-9 in. (20-22 cm) long, and are cylindrical, shiny and dark green. They have good shelf life and retain an attractive shine in storage.

**Resistances:** IR: CMV/CVYV/CYSDV/Px.

# Cucumber

## LONG EUROPEAN TYPE (LET)



### Poniente F1

Poniente offers a strong resistance package and produces uniform dark green fruit that are 12-13 in. (31-34 cm) long and nicely ribbed. The plant habit is vigorous with a dependable fruit set, 1-2 fruit per node, and early maturity. Recommended for unheated and heated greenhouse production, Poniente performs best in the spring and fall in hot climates, and does well in spring, summer and fall in cooler climates.

**Resistances:** HR: Ccu. | IR: CMV/CVYV/CYSDV/Px.



### Tyria F1

Tyria is a very vigorous variety, developing dark green, slightly ribbed, well-filled fruits of 13 in. (33-36 cm) in length with a gradual production change from the main stem to the laterals. It can be grown in the open field and unheated greenhouse over a broad range of seasons.

**Resistances:** HR: Cca/Ccu. | IR: Px.

## MINI



### Katrina F1

Katrina is a robust and productive mini cucumber with an open plant habit and only a few laterals. The fruits, 3-4 per node, are of top quality. They are glossy, nicely ribbed, very uniform and 6 in. (16 cm) in length. Good resistance package for unheated greenhouse production.

**Resistances:** HR: Ccu. | IR: CMV/CVYV/Px/CGMMV.



### Picolino F1

Picolino is a widely adaptable mini cucumber variety that is the smallest of the Vitalis assortment. Produces high quality, dark green, shiny fruits of 4-5 in. (10-12 cm) that are nicely ribbed and extremely uniform. With 3-4 fruits per node, the compact, vigorous plants are early to produce.

**Resistances:** HR: Cca/Ccu. | IR: CMV/CVYV/Px.



### Socrates F1

Socrates is a dependable variety that produces dark green fruits of 7 in. (17-18 cm), which are both tender and sweet. Adapted to open field and unheated greenhouse conditions, Socrates performs best in spring and fall.

**Resistances:** HR: Ccu. | IR: Px.



# Cucumber

## PICKLING



### Excelsior F1

Excelsior is a high quality pickling cucumber for both open field and unheated greenhouse production in spring and fall. It has an open and vigorous plant habit, with fruits that are medium to dark green and 4-5 in. (10-13 cm) in length.

**Resistances:** HR: Cca/Ccu. | IR: CMV/CVYV/Px.

### LONG EUROPEAN TYPE (LET)

Variety	Plant Habit	Open Field	High Tunnel/ Unheated Greenhouse	Heated Greenhouse	Length (in)	Length (cm)	Slotting
Kalunga	Balanced		✓		12-13	31-34	Flexible
Poniente	Vigorous		✓	✓	12-13	31-34	Flexible
Tyria	Vigorous	✓	✓		13-14	33-36	Flexible

### MINI

Variety	Plant Habit	Open Field	High Tunnel/ Unheated Greenhouse	Heated Greenhouse	Length (in)	Length (cm)	Slotting
Katrina	Compact		✓	✓	6	16	High Heat/High Light
Picolino	Vigorous		✓		4-5	10-13	Flexible
Socrates	Vigorous	✓	✓	✓	6-7	16-17	Flexible

### PICKLING

Excelsior	Vigorous	✓	✓		4-5	10-13	Flexible
-----------	----------	---	---	--	-----	-------	----------

All Vitalis cucumbers have all female flowers and are parthenocarpic (fruits can set without pollination).

# How's your Vitalis cu-cabulary?



The robust cucumber program offered by Vitalis is entirely “gynoecious” and “parthenocarpic”, meaning that the varieties produce **only female flowers and do not require pollination by insects**. Ideal for high tunnel, open field and greenhouse environments, the broad assortment of long-European, slicer and mini types all feature high yield, great taste, strong disease resistance and are labor friendly.





## TOMATO DELIGHT!

The perfect mix of old-world goodness with a twist of modern world traits!



**Named for the perfect blend of heirloom goodness with a twist of the most highly coveted modern world traits, Mixologist presents a unique opportunity to experience unmatched breeding craft and quality in a premium collection from Vitalis Organic Seeds.**

This gorgeous ensemble reliably delivers high yields, great fruit quality and impressive post-harvest traits. A veritable showstopper of colors and full-bodied shapes, Mixologist is also highly versatile and ideal for diverse markets, from wholesale and local markets to professional chefs to home kitchens.

The sweet, fresh and tangy flavors of Mixologist are as decadent as the fun libations they are named for: **CubaLibre, GinFiz, Enroza, MaiTai** and **Marsalato**.

The old-world quality and splendor of Mixologist's Italian breeding roots will delight every North American table. Your customers will appreciate the choice to grow Mixologist.

**ORGANIC**  
Selected to perform under organic conditions

**RESISTANT**  
Great disease package  
High resistance to leaf mold

**HIGHLY MARKETABLE**  
Competitive quality  
Firm fruit withstand handling  
Size uniformity

**GROWER FRIENDLY**  
High yielding  
Adaptable varieties

**GORGEOUS DISPLAYS**  
Shelf and consumer-friendly  
A mix of striking color combos  
Full-bodied shapes

**WONDERFUL FLAVORS**  
Sweet, tangy, and bright  
Tomato-perfect texture



CREATING AN ORGANIC WORLD TOGETHER.

# Tomato



## INDETERMINATE RED ROUND



### Caiman F1

This early maturing and high yielding indeterminate hybrid has a vigorous, open, compact plant with short internodes and good fruit set. The round fruit are large in size, 7.5-8.5 oz. (220-240 g), very tasty, and have an attractive deep red color. Caiman is easy to cultivate, and particularly recommended for unheated protected culture in the spring and summer.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Va:0/Vd:0/Fol:0-1. | IR: TSWV/Ma/Mi/Mj.

## SEMI-DETERMINATE RED ROUND



### Skyway 687 F1

Skyway 687 produces large, high quality 12 oz. (355 g) tomatoes for open field production. This variety is especially well-suited for organic production in the Southeast because of its strong disease package, including virus and nematode resistance. Skyway has a vigorous, semi-determinate habit, and benefits significantly from pruning of ground shoots at the start of the crop. Wide adaptability to diverse growing conditions and regions.

**Resistances:** HR: ToANV/Va:0/Vd:0/Fol:0-2. | IR: TSWV/TYLCV/Ma/Mi/Mj.

## SPECIALTY



### CubaLibre F1

CubaLibre is a deep round purple tomato that combines excellent productivity and quality. Fruits average 6-10 oz. (170-283 g) and pair well with MaiTai for an attractive display. CubaLibre is sweet tasting with smooth texture and crack-resistant exterior. Plant vigor is excellent with both leaf mold and powdery mildew resistances for very strong performance in high tunnel systems.

**Resistances:** HR: ToMV:0-2/ToANV/Ff:A-E/Fol:0,1. | IR: On.



### GinFiz F1

GinFiz combines the flavor, texture and color of Striped German with the disease resistance and productivity of modern hybrids. Fruits average 10-14 oz. (283-397 g), exhibit minimal cracking and are delicious. GinFiz has excellent early fruit yields and incorporates leaf mold resistance for improved high tunnel production. GinFiz is a generative plant and benefits from grafting and single leader production.

**Resistances:** HR: ToMV:0-2/ToANV/Ff:A-E/Va:0/Vd:0/For.



### Enroza F1

Enroza is the newest addition to our Mixologist Collection with outstanding flavor. We trial many varieties each year, and Enroza is always the variety that ends up on our dinner plate at the end of the day. Enroza is a small round pink tomato, with high-yielding fruit that average about 6-7 oz. (170-200 g). It has an excellent disease resistance package and is well-suited for high tunnels and greenhouses, yet also productive in open field conditions.

**Resistances:** HR: ToMV:0-2/ToANV/Ff:A-E/Va:0/Vd:0/Fol:0,1/For. | IR: Ss.



### MaiTai F1

MaiTai is an attractive round yellow tomato with a delicate red blush at the blossom end. During trials, the sweet, tangy flavor and perfectly balanced texture of this superior eating quality tomato won us over. The eating quality of this variety won us over in our trials, with a sweet tangy flavor and melt-in-your-mouth texture. Fruits average 6-10 oz. (170-283 g). MaiTai has good vigor and productivity, with leaf mold resistance for improved high tunnel production.

**Resistances:** HR: ToMV:0-2/ToANV/Ff:A-E/Va:0/Vd:0/Fol:0,1/For.



### Marsalato F1

This unique Marmande tomato originates from our specialty breeding program in Italy and yields a high volume of 6.7 oz. (190 g) red fruits with deeply ribbed shoulders, a shiny exterior and small blossom end scar. With a balanced, generative growth habit and leaf mold resistance, Marsalato is well-suited for protected culture systems, but is also adaptable to the open field, especially in more moderate climates. We suggest harvesting fruit with slightly green shoulders for a crisp texture and a tangy flavor.

**Resistances:** HR: ToMV:0-2/ToANV/Ff:A-E/Va:0/Vd:0/Fol:0,1/For.

	CubaLibre F1	GinFiz F1	Enroza F1	MaiTai F1	Marsalato F1
Cultivation	Protected Culture & Open Field	Protected Culture & Open Field	Protected Culture & Open Field	Protected Culture & Open Field	Protected Culture & Open Field
Maturity	Intermediate	Early	Early-Intermediate	Intermediate	Early-Intermediate
Plant Habit	Indeterminate   Balanced	Indeterminate   Generative	Intermediate   Balanced	Indeterminate   Balanced	Indeterminate   Balanced
Shape	Round	Flat Round	Round	Round	Flat round with heavy ribs
Color	Purple	Yellow with red streaking	Dark pink	Yellow with red blush	Deep red
Weight	6-10 oz.   170-283 g	10-14 oz.   283-397 g	6-7 oz.   170-200 g	6-10 oz.   170-283 g	6.7 oz.   190 g



# Tomato

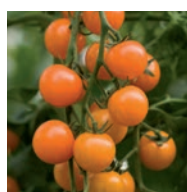
## CHERRY



### Sakura F1

Sakura is a standout cherry tomato, producing beautiful mid-sized round fruit of 0.5-0.8 oz. (15-20 g) with a sweet and tangy flavor. The fruits are tolerant to cracking, with well-attached sepals and magnificent trusses of 20 fruits or more. Well adapted to open field and unheated greenhouse production.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Fol:0-1. | IR: Ma/Mi/Mj. | T: Si.



### Toronjina F1

Toronjina is a highly attractive orange cherry tomato with vibrant color and good tolerance to cracking. Adaptable to open field and unheated greenhouse production, this orange cherry is an excellent addition to mixed pints of colored cherry tomatoes. Produces high yields of 0.6-0.8 oz. (18-22 g) tomatoes.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Fol:0-1.

## PLUM



### Granadero F1

An indeterminate plum tomato variety with a compact vigorous plant for the open field or unheated greenhouse production. Granadero delivers high yields of large fruit, with an average weight of 5.0 oz. (150 g), and demonstrates tolerance to cooler conditions.

**Resistances:** HR: ToMV:0-2/Lt/Va:0/Vd:0/Fol:0-1. | IR: TSWV/Ma/Mi/Mj.

## SAN MARZANO



### Pozzano F1

A traditional looking 'San Marzano' tomato that produces a bountiful yield of smooth shaped, uniform fruit of 5.0 oz. (150 g). Fruits are robust, without green shoulders, and have good tolerance to blossom end rot. The firm fruits have excellent shelf life.

**Resistances:** HR: ToMV:0-2/Va:0/Vd:0/Fol:0-1.

# Heated Greenhouse Tomato

## TOMATO ON THE VINE (TOV)



### Maxeza F1

Maxeza is a unique truss tomato that combines high yield potential with good fruit color and firmness. The plant is very vigorous and will maintain uniform fruit sizes of 4.9-5.3 oz. (140-150 g), even during the heat of the summer. Maxeza is the perfect variety for growers who are aiming for early and sustained production.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Fol:0-1/For. | IR: On. | T: Si.

## COCKTAIL



### Annamay F1

Annamay is a slightly smaller cocktail tomato with an average weight of 1.2-1.4 oz. (35-40 g), extremely attractive fruit, and very sweet and aromatic flavor. The trusses are well shaped, compact and very uniform. The plant habit is strong and performs best under heated greenhouse production.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Va:0/Vd:0/Fol:0,1. | IR: On. | T: Si.

## CHERRY



### Tomagino F1

Tomagino stands out for its sweet flavor and its strong resistance to splitting. Well-balanced plants have excellent setting and are fast to mature, making it suitable for year round production. Expect 0.6-0.7 oz. (17-20 g) fruits, with superior color and shine, on highly uniform vines. This variety also works well for TOV (tomatoes on the vine) production.

**Resistances:** HR: ToMV:0-2/Va:0/Vd:0/Fol:0/For. | IR: On.



### Tomagellow F1 & Tomarange F1

Tomagellow (yellow cherry) and Tomarange (orange cherry) create the perfect trio with Tomagino (red cherry). With a similar genetic background to Tomagino, Tomagellow and Tomarange plants are uniform, balanced and easy to manage. Fruit size matches well at 0.7-0.8 oz. (20-22 g), and demonstrate the characteristic sweet flavor, glossy color, and excellent crack resistance of Tomagino. Disease resistance packages vary slightly.

**Tomagellow Resistances:** HR: ToMV:0-2/Va:0/Vd:0/Fol:0,1/For.

**Tomarange Resistances:** HR: ToMV:0-2/ToANV/Fol:0/For. | IR: On.



# Sweet Pepper



## BLOCKY GREEN TO RED



### Olympus F1

Olympus is an extra-large, 4 in. (10 cm+) and slightly elongated blocky bell. It colors from green to dark red and has thick side walls. It is very productive and has a vigorous bush that provides plenty of shade for those long seasons. Recommended for open field production.

**Resistances:** HR: Xcv:1-3.



### Sprinter F1

Sprinter produces high yields of beautiful 3.5 in. (8-9 cm) peppers for a long production period. This variety is not sensitive to blossom end rot or russetting. Sprinter will turn a brilliant red at maturity, with thick walls and sweet flavor. Recommended for open field and unheated greenhouse production.

**Resistances:** HR: Tm:0-3.

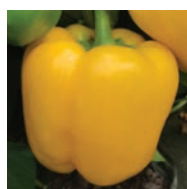
## BLOCKY YELLOW



### Abay F1

Abay produces large fruits of 4 in. (10 cm) with thick walls that mature from dark green to yellow. Suitable for spring and fall plantings in the open field in the Southeast, and as a late season main crop in the Northeast and Midwest. Excellent Bacterial Leaf Spot resistance.

**Resistances:** HR: Xcv:1-5/Tm:0.



### Brocanto F1

Brocanto is a blocky yellow bell well-suited for high tunnel production. Fruit are a bright yellow color, with excellent uniformity and smooth skin. Plant habit is vigorous and benefits from trellising. Brocanto's color and size, averaging 3.5 in. (8-9 cm), pairs well with Sprinter and Milena to create an attractive display.

**Resistances:** HR: Tm:0-3. | IR: TSWV:0.

## BLOCKY ORANGE



### Milena F1

Milena is an early maturing orange bell. High quality fruits have a dark orange color and medium size, averaging 3.5 in. (8-9 cm). The plant has a vigorous, open habit with good yield and strong resistance to viruses. Best suited for open field and unheated tunnel production. Milena is a standout variety that delivers uniform fruits and high productivity.

**Resistances:** HR: PVY:0-1/Tm:0-3. | IR: TSWV:0/TEV.



### Mozart F1

Mozart is a brilliant orange blocky pepper for high tunnel and unheated greenhouse production. Uniform, high quality, blocky fruits are resistant to cracking. Fruits maintain good sizes over a long harvest cycle. The plant has an open habit that is easy to prune. Mozart is widely adapted.

**Resistances:** HR: Tm:0-3. | IR: TSWV:0.

# Diverse Pepper

## LONG SWEET CONICAL



### Oranos F1

This outstanding orange conical pepper is a very early variety that produces vigorous plants with fruits 7 x 1.5 in. (18 x 4 cm) in size. Oranos is especially appreciated for its high yields and easy growth habit. Staking of this variety is recommended to ensure a long harvest window.

**Resistances:** HR: Tm:0.

# Hot Pepper

## ANCHO



### Bastan F1

This flavorful pepper has good heat and matures to a beautiful chocolate color. Medium sized fruits average 5.5 x 2.5 in. (14 x 6 cm), are thick walled and have a dark green color prior to ripening. The plant produces a concentrated set of consistently high quality fruits for fresh market. Thanks to robust leaf cover and medium-early maturity, Bastan delivers excellent yields.



# Heated Greenhouse Peppers

## BLOCKY RED



### Margrethe F1

Margrethe is a vigorous blocky red pepper for glasshouse production that has flexibility in different climates. The fruit are slightly larger than Maureno, but still maintain enough smaller fruit for pre-pack and bagging. The plant is strong and sets fruit easily. Immature fruit are a dark green and are medium-fast to mature to an attractive red.

**Resistances:** HR: Tm:0-3.



### Maureno F1

Maureno is an adaptable variety that sets fruit easily and is extremely fast to mature from dark green to red. Fruits are smaller than both Triple 5 and Margrethe and are ideal for pre-pack and bagging, with excellent uniformity and shelf-life. The plant is strongly generative, maintaining production even under warm and humid conditions.

**Resistances:** HR: Tm:0-3.



### Triple 5 F1

Triple 5 has a semi-open plant architecture and a generative habit that sets fruit easily. This high yielding variety works best when managed as a fast growing crop. High quality, extra-large fruits are uniform and blocky during the entire life of the crop. Fruits average 3.5 in. (8-9 cm).

**Resistances:** HR: Tm:0-3. | IR: Ma/Mi/Mj.

	Margrethe	Maureno	Triple 5
Color	Red	Red	Red
Size Range	Large-XLarge	Medium-XLarge	XLarge

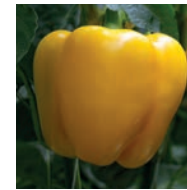
## BLOCKY YELLOW



### Gialte F1

Gialte is a yellow blocky pepper with exceptional production and quality. The flexible nature of this variety makes it well-suited to all cultivation systems. Fruit size is medium to large, and works well for mixed bag sales. With an attractive yellow color, good uniformity and excellent shelf-life, Gialte is a great addition to a colored bell program.

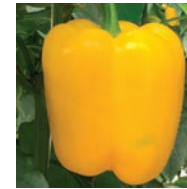
**Resistances:** HR: Tm:0-3.



### Eurix F1

This yellow blocky bell pepper was a standout in trials for its early maturity, consistently high yields and ease of fruit set. Eurix has a strong root system which contributes to uniform size of extra-large fruit, as well as adaptability to a range of growing conditions while maintaining a generative balance. Fruit is light green when immature, and colors to a medium yellow, with exceptional shelf-life.

**Resistances:** HR: Tm:0-2.

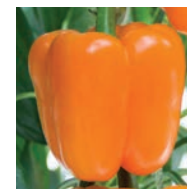


### Florata F1

Florata is a yellow blocky pepper with flexibility in different climates and greenhouse structures. The fruit are slightly smaller than Eurix, and are ideal for pre-pack and bagging, with excellent uniformity and shelf-life. Florata has a strong plant that sets fruit easily.

**Resistances:** HR: Tm:0-3. | IR: TSWV:0.

## BLOCKY ORANGE



### Orbit F1

Orbit is an orange blocky bell pepper with a vigorous plant habit and high yield. Trials in Canada, the USA and Mexico have shown Orbit to be adaptable in early and late sowings and productive throughout the season, with extra-large fruit. This exciting addition offers growers a versatile and high-quality orange pepper with impressive shelf life that will nicely round out their assortment.

**Resistances:** HR: Tm:0-3.



### Originale F1

This orange bell pepper produces blocky fruit with good quality that are an ideal size for bagging and strong against pitting. The plant is moderate in height with an open, generative structure that can be grown in either glass or poly structures. Originale sets fruit early, and colors quickly, producing high yields that are easy to harvest.

**Resistances:** HR: Tm:0-3. | IR: TSWV:0.

	Gialte	Eurix	Florata	Orbit	Originale
Color	Yellow	Yellow	Yellow	Orange	Orange
Size Range	Medium-Large	XLarge-XXLarge	Large-XLarge	XLarge-XXLarge	XLarge



# Rootstock

## TOMATO ROOTSTOCK

### Espartano F1

Espartano is our strongest rootstock, maintaining a balanced growth effect on the scion and not becoming too vigorous. The endurance of this rootstock ensures excellent plant vigor and high fruit production until the end of the growing season. In long season production (8+ months), when the roots are stressed by moving from cold to warm weather, Espartano ensures that the average fruit weight remains stable, resulting in increased total yields.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Va:0/Vd:0/Fol:0-2/For. | IR: TSWV/Ma/Mi/Mj.

### Estamino F1

A vigorous rootstock with an early generative effect on the growth of the scion. An Estamino graft results in a well-balanced plant with steady production throughout the cultivation cycle. Estamino can be used to control excessive vegetative growth and increase total yield. This rootstock is recommended for short season (5-7 months) production.

**Resistances:** HR: ToMV:0-2/Ff:A-E/Va:0/Vd:0/Fol:0-2/For. | IR: TSWV/PI/Ma/Mi/Mj.

### Fortamino F1

Fortamino is especially recommended for use when transplanting into hot or stressed growing conditions. The strong root system provides extra vegetative power to the scion in the early stage of growth, developing very good leaf cover and ensuring excellent recovery after experiencing unfavorable conditions. Grafting onto Fortamino rootstock will also increase the number of flowers per truss, the average fruit weight and fruit size uniformity, especially for large-fruited heirlooms. Fortamino is adaptable to both short and long season production.

**Resistances:** HR: ToMV:0-2/Ff:A-E/PI/Va:0/Vd:0/Fol:0-2/For. | IR: TSWV/Ma/Mi/Mj.

## CUCURBIT ROOTSTOCK

### Flexifort F1

Use of Flexifort rootstock is recommended for cucumber, melon, and watermelon growers seeking a longer, healthier crop. This rootstock brings increased vigor and a high return of quality fruits. Flexifort is an interspecific *Cucurbita maxima* x *Cucurbita moschata* cross that combines nicely with a wide number of varieties. It provides resistance to several soil borne diseases, as well as abiotic stresses such as drought, temperature extremes and high salinity.

**Resistances:** HR: Fom:0-2/Fom:1.2/Fon:0-1/Foc. | IR: Forc.

# Eggplant

## EGGPLANT



### Annina F1

This gorgeous striped eggplant will not fail to impress growers and eaters alike. This adaptable variety produces well in both high tunnel and open field production systems, and yields half-long, uniform fruit that average 0.7 lb. (318 g). Growers will appreciate the spineless calyx, and customers will love the deep purple color striped with fine white lines.



### Traviata F1

Traviata is a strong growing, well-balanced plant that produces half-long, uniform, black, shiny fruits. A high yielding and early variety recommended for spring and summer open field and unheated greenhouse production.

# Melon

## SPECIALTY CANTALOUPE

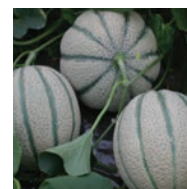


### Divergent F1

Divergent defies classification—part Cantaloupe, part Galia, all flavor! This variety is sweet (Brix 15-18°), juicy and ripens earliest in its class. Orange fleshed, round fruits are medium-size, 2.6-3.0 lb. (1.2-1.4 kg) and set close to the crown for a concentrated harvest. Succession plantings are recommended for a continuous supply throughout the season, as the early maturity allows for the crop to be harvested in two to three passes. Noted for its uniformity in maturity, melons are ready to harvest when the netting begins to turn from green to tan. Divergent is an adaptable, high yielding variety that performs well in many regions, including northern areas with shorter seasons. Recommended for fresh market production only.

**Resistances:** HR: Fom:0,1,2. | IR: Gc:1/Px:1,2,5/Ag.

## ITALIAN NETTED



### Tirreno F1

Tirreno is a favorite among northern growers. It was selected for its flavor, uniformity and solid production under organic conditions. Tirreno produces round to slightly high round fruits with uniform sutures and thick netting. It has excellent fruit quality with good flesh structure and a slightly thick, green rind. Brix levels average 13-15°. Exterior skin color is grey to cream with an interior orange flesh color. It produces 2.6-3.0 lb. (1.2-1.4 kg) fruits.

**Resistances:** HR: Fom:0,1,2/MNSV | IR: Px:1,2,5.



# Watermelon



At Vitalis Organic Seeds we're proud of our assortment of 100% certified organic triploid watermelons.

This represents a unique opportunity for organic growers in multiple regions across North America to grow strong, full-size seedless organic watermelons. **Red Amber** and **Cracker Jack** are both high yielding, vigorous plants with beautiful red flesh, great texture and superior taste.

## WATERMELON



### Cracker Jack F1

Cracker Jack is our earliest maturing watermelon with a very strong vine that has a continuous fruit setting ability and produces blocky, oval fruit. Fruit are uniform with firm flesh and a very deep red internal color. Cracker Jack is recognized by growers and brokers alike for its outstanding yields, excellent sweetness and small pips. Average weights are from 15-18 lbs. (6.8-8.2 kg).

**Resistances:** IR: Fon:0/Fon:1/Co:1.



### Red Amber F1

Our first seedless organic watermelon, Red Amber is a deliciously sweet standard watermelon with crisp texture and a dark red interior. Rind pattern is a medium green background with a medium-dark green stripe. Fruit are oval shaped, uniform and average 16-20 lbs. (7.3-9.1 kg). Red Amber has a strong and vigorous plant with good performance in organic systems.

**Resistances:** IR: Fon:0/Fon:1/Co:1.

Variety	Fruit Count Size Distribution			
	60	45	36	28
Cracker Jack (E26C.00063)				
Red Amber				



# Summer Squash

## ZUCCHINI, GREEN



### Desert F1

Desert produces very dark green uniform fruits that set well under a variety of conditions. Fruits are straight, uniform and slightly speckled. Open, compact plants allow for easy harvest. Desert works well under high tunnel production conditions due to early and productive flowering. It has a strong disease resistance package.

**Resistances:** IR: Px/CMV/ZYMV/WMV/PRSV.



### Dunja F1

Dunja has emerged as a standout variety for organic production. The plant has a vigorous, open growth habit, sets fruits easily and is high yielding. Fruits are medium-dark green, moderately flecked and shiny. Dunja also has a strong disease resistance package, and is appropriate for open field or tunnel production.

**Resistances:** IR: Px/ZYMV/WMV/PRSV.



### Green Machine F1

Consistently a top performer in Midwest and East Coast field trials, Green Machine is a steady producer of uniform, medium green fruits of exceptional quality. With high yield potential and an open, labor-friendly plant habit, Green Machine also offers strong protection against virus and powdery mildew.

**Resistances:** IR: Px/CMV/ZYMV/WMV.



### Renegade F1

Renegade is our newest zucchini developed specifically for the East Coast market. Fruit are medium-dark green with exceptional gloss and uniformity. In addition to the outstanding fruit quality, Renegade is easy to pick with an upright, open habit and minimal spines. Growers will also appreciate the strong disease package and high yield potential.

**Resistances:** HR: ZYMV/WMV/PRSV. | IR: Px.

## ZUCCHINI, GRAY



### Mexicana F1

Mexicana offers higher yields and ease of harvest compared to the competition. Fruit are early, uniform, grey-green in color, and highly prolific. The upright, open plant habit is characteristic of the Vitalis zucchini breeding program. Mexicana's flavor is nutty and tender and definitely worth a try!

**Resistances:** IR: Px/CMV/ZYMV/WMV/PRSV/SLCV.

## ZUCCHINI, YELLOW



### Yellowfin F1

Yellowfin has a brilliant yellow color and produces high yields of straight, cylindrical fruits. Compact plants are vigorous and have an open habit for ease of harvest. This variety has the vigor and disease resistance required to withstand tough field conditions and still produce an abundant harvest. Strong resistance to powdery mildew.

**Resistances:** IR: Px/CMV.

# Winter Squash

## BUTTERNUT



### Havana F1

Havana is the largest of our butternuts, with tan fruits that average 3-4 lb. (1.3-1.8 kg). This variety is uniform and extremely productive. Blocky fruits have a thick neck and a small seed cavity. Flesh is intense orange and tasty. The plant is vigorous and semi-vining, with some tolerance to powdery mildew. Havana has good post-harvest shelf life, and ripens fairly early for its size.

**Resistances:** IR: Px/ZYMV.



### Tiana F1

Tiana is a blocky, slightly cylindrical variety with an average fruit size of 2.2-2.5 lb. (1.0-1.2 kg) and fruit dimensions of 7 x 3 in. (18 x 8 cm). The yield potential of Tiana is up to 50% higher than any open pollinated butternut. The fruit quality is very consistent and the exterior skin color is an intense dark tan color.

**Resistances:** IR: ZYMV.



# Herbs

## BASIL (*OCIMUM BASILICUM*)



### Dolly

Our largest-leaf Genovese type basil that is very uniform and fast growing. Dolly demonstrates better tolerance against low temperatures compared to other basil varieties.



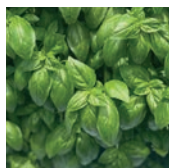
### Genoveser

Traditional cup-shaped, dark green, shiny leaved variety for field production. High yielding with strong, sweet basil aroma.



### Keira

Keira has been bred for improved shelf-life and post-harvest tolerance to cold temperatures. Medium size, shiny leaves and short internodes are ideal for pot production, but also works in the open field. Keira delivers an attractive end product after transport.



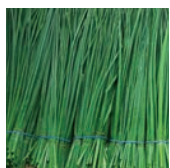
### Evi



Evi is a downy mildew tolerant variety that can be used in many applications. Dark green, glossy leaves are medium size with traditional cupping. Plants have intermediate internodes and can be used in both open field and CEA environments. Evi offers good bolt tolerance and a nice basil flavor.

**Resistances:** IR: Pb.

## CHIVES (*ALLIUM SCHOENOPRASSUM*)



### Nelly

An extra thick, dark green variety for a broad range of growing purposes, including forcing and pot production. Appropriate for fresh cut and industrial markets.



### Staro

Thickly feathered leaf cilantro with excellent plant emergence, late bolting and high yielding for open field or greenhouse production.

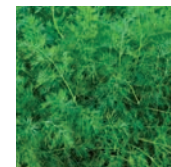
## CILANTRO (*CORIANDRUM SATIVUM*)



### Marino

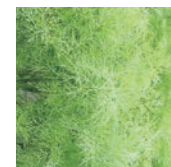
Thickly feathered leaf cilantro with excellent plant emergence, late bolting and high yielding for open field or greenhouse production.

## DILL (*ANETHUM GRAVEOLENS*)



### Ella

Ella is an attractive dark green dill variety bred for pot and babyleaf production. Its short hypocotyl gives it a sturdy upright and compact plant habit.



### Green Sleeves

A uniform dark green dill for production of fresh bunches. Green Sleeves is resistant to bolting and is suited for year-round growing in open field and greenhouse production.

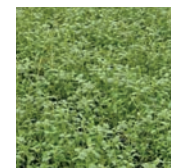
## SAGE (*SALVIA OFFICINALIS*)



### Fanni

A quality sage selection with large leaves, excellent yield and dependable germination. Fanni produces well in open field and greenhouse conditions.

## THYME (*THYMUS VULGARIS*)



### German Winter

A bushy plant with broad leaves that can be used for open field or greenhouse production of fresh or dried product.



# Resistances

Descriptions, recommendations and illustrations in this catalogue correspond as closely as possible to tests and practical experience. This information is provided to assist professional growers and users; however, variable local conditions must be taken into account. Under no circumstances shall Vitalis Organic Seeds, North America, accept liability based on such information for deviating results in the cultivated product. The Purchaser is responsible for determining whether the items are suitable for the intended cultivation type and location.

## IMPORTANT RESISTANCE INFORMATION

Resistances in varieties of our crops are coded, unless indicated otherwise. See explanation of our coding list at [www.vitalisorganic.com](http://www.vitalisorganic.com).

If a variety is resistant to more than one pathogen, the individual resistance codes will be separated by the symbol "/".

- If in a resistance code of a certain variety reference is made to certain strains for which the resistance is claimed, this means that no resistance is claimed to other strains of the same pathogen.
- If in a resistance code no reference is made to specific strains of the pathogen for which the resistance is claimed, this means that resistance is claimed only generally to the pathogen, and not to specific strains of the pathogen.

Crop	Type	Scientific Name Pathogen ISF	English Name	Code	Races/ Strains	Level of Resistance	Remark
Arugula	Viruses	<i>Hyaloperonospora parasitica</i>	Downy mildew	Hp		IR	
Basil	Fungi	<i>Peronospora belbahrii</i>	Downy mildew	Pb		IR	
		<i>Fusarium oxysporum f. sp. basilicum</i>	Fusarium Wilt	Fob		IR	
Cucumber	Viruses	<i>Beet pseudo yellowing virus</i>	Beet pseudo yellowing virus	BPYV		IR	
		<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV		IR	
		<i>Cucumber vein yellowing virus</i>	Cucumber vein yellowing	CVYV		IR	
		<i>Cucurbit yellow stunting disorder virus</i>	Cucumber yellowing stunting disorder	CYSDV		IR	
		<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV		IR	
		<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV		IR	
		<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV		IR	
		<i>Cucumber green mottle mosaic virus</i>	Cucumber green mottle	CGMMV		IR	
	Bacteria	<i>Pseudomonas syringae pv. lachrymans</i>	Angular leaf spot	PsI		IR	
	Fungi	<i>Cladosporium cucumerinum</i>	Scab and gummosis	Ccu		HR	
		<i>Colletotrichum orbiculare</i>	Anthracnose	Co	1	IR	
		<i>Colletotrichum orbiculare</i>	Anthracnose	Co	2	IR	
		<i>Colletotrichum orbiculare</i>	Anthracnose	Co	3	IR	
		<i>Corynespora cassiicola</i>	Corynespora blight and target spot	Cca		HR	
		<i>Fusarium oxysporum f.sp. cucumerinum</i>	Fusarium wilt	Foc	1	IR	
		<i>Fusarium oxysporum f.sp. cucumerinum</i>	Fusarium wilt	Foc	2	IR	
		<i>Fusarium oxysporum f.sp. cucumerinum</i>	Fusarium wilt	Foc	3	IR	
		<i>Podospaera xanthii (ex. Sphaerotheca fuliginea)</i>	Powdery mildew	Px		IR	
		<i>Pseudoperonospora cubensis</i>	Downy mildew	Pcu		IR	
Lettuce	Viruses	<i>Lettuce mosaic virus</i>	Lettuce mosaic	LMV	1	IR	LMV:1
		<i>Tomato bushy stunt virus</i>	Lettuce die-back	TBSV		HR	
	Bacteria	<i>Sphingomonas suberifaciens (now Rhizomonas suberifaciens)</i>	Corky root	Ss		IR	
	Fungi	<i>Bremia lactucae</i>	Downy mildew	Bl	16-37EU	HR	In USA called Bl:1-9US
		<i>Fusarium oxysporum f.sp. lactucae</i>	Fusarium wilt	Fol	1	IR/HR	
		<i>Fusarium oxysporum f.sp. lactucae</i>	Fusarium wilt	Fol	2	IR/HR	
		<i>Fusarium oxysporum f.sp. lactucae</i>	Fusarium wilt	Fol	4	IR/HR	
	Insects	<i>Macrosiphum euphorbiae</i>	Potato aphid	Me		IR	
		<i>Nasonovia ribisnigri</i>	Lettuce leaf aphid	Nr	0	HR	
		<i>Pemphigus bursarius</i>	Lettuce root aphid	Pb		HR	

HR: High Resistance | IR: Intermediate Resistance

Crop	Type	Scientific Name Pathogen ISF	English Name	Code	Races/ Strains	Level of Resistance	Remark	
Melon	Viruses	<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV		IR		
		<i>Melon Necrotic Spot Virus</i>	Melon necrotic spot	MNSV		HR		
		<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV		IR		
		<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV		IR		
			<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV		IR	
	Fungi	<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	0	HR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	1	HR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	2	HR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	1.2	IR		
		<i>Golovinomyces cichoracearum (ex. Erysiphe cichoracearum)</i>	Powdery mildew	Gc	1	IR		
		<i>Podospaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px	1	IR		
		<i>Podospaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px	2	IR		
		<i>Podospaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px	3	IR		
		<i>Podospaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px	5	IR		
		<i>Podospaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px	3.5	IR		
Insects	<i>Aphis gossypii</i>	Cotton aphid	Ag		IR			
Parsley	Fungi	<i>Septoria petroselini</i>	Septoria blight	Sp		IR		
		<i>Plasmopara petroselini</i>	Downy mildew	Pp		IR		
Pepper	Viruses	<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV		IR		
		<i>Pepper mottle virus</i>	Pepper mottle	PepMoV		HR		
		<i>Pepper yellow mosaic virus</i>	Pepper yellow mosaic	PepYMV		HR		
		<i>Potato Y virus</i>	Potato Y	PVY	0	HR	PVY:0	
		<i>Potato Y virus</i>	Potato Y	PVY	1	HR	PVY:1	
		<i>Potato Y virus</i>	Potato Y	PVY	1.2	HR	PVY:2	
			<i>Tobacco etch virus</i>	Tobacco etch	TEV		IR	
	Tobamovirus group	<i>Tobamovirus (ToMV, TMV, PMMoV)</i>		Tm	0	HR	Tm:0	
		<i>Tobamovirus (ToMV, TMV, TMGMV, PMMoV)</i>		Tm	0, 1	HR	Tm:0,1	
		<i>Tobamovirus (ToMV, TMV, TMGMV, PMMoV)</i>		Tm	0, 1, 1.2	HR	Tm:0-2	
		<i>Tobamovirus (ToMV, TMV, TMGMV, PMMoV)</i>		Tm	0, 1, 1.2, 1.2.3	HR	Tm:0-3	
			<i>Tomato spotted wilt virus</i>	Tomato spotted wilt	TSWV	0	IR	
	Bacteria	<i>Xanthomonas campestris pv. vesicatoria</i>	Bacterial spot	Xcv	1	HR		
		<i>Xanthomonas campestris pv. vesicatoria</i>	Bacterial spot	Xcv	2	HR		
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	3	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	4	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	5	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	6	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	7	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	8	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	9	HR			
<i>Xanthomonas campestris pv. vesicatoria</i>		Bacterial spot	Xcv	10	HR			
Fungi	<i>Phytophthora capsici</i>	Buckeye fruit and root rot	Pc		IR			
	<i>Leveillula taurica (anamorph: Oidiopsis sicula)</i>	Leveillula taurica	Lt		IR			
Nematode	<i>Meloidogyne arenaria</i>	Root-knot	Ma		IR	Resistance can be adversely affected at elevated soil temperatures (>28°C)		
	<i>Meloidogyne incognita</i>	Root-knot	Mi		IR			
	<i>Meloidogyne javanica</i>	Root-knot	Mj		IR			
Abiotic	Cracking		Cr		T			
	Stip		St		T			

HR: High Resistance | IR: Intermediate Resistance | T: Tolerance





Crop	Type	Scientific Name Pathogen ISF	English Name	Code	Races/ Strains	Level of Resistance	Remark	
Rootstock, Cucurbit	Fungi	<i>Fusarium oxysporum f.sp. cucumerinum</i>	Fusarium wilt	Foc	1	HR		
		<i>Fusarium oxysporum f.sp. cucumerinum</i>	Fusarium wilt	Foc	2	HR		
		<i>Fusarium oxysporum f.sp. cucumerinum</i>	Fusarium wilt	Foc	3	HR		
		<i>Fusarium oxysporum f.sp. radicle-cucumerinum</i>	Fusarium crown and root rot	Forc		IR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	0	HR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	1	HR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	2	HR		
		<i>Fusarium oxysporum f.sp. melonis</i>	Fusarium wilt	Fom	1.2	HR		
		<i>Fusarium oxysporum f.sp. niveum</i>	Fusarium wilt	Fon	0	HR		
		<i>Fusarium oxysporum f.sp. niveum</i>	Fusarium wilt	Fon	1	HR		
		<i>Fusarium oxysporum f.sp. niveum</i>	Fusarium wilt	Fon	2	HR		
		<i>Colletotrichum orbiculare (ex Colletotrichum lagenarium)</i>	Anthraxnose	Co	1	IR		
		<i>Colletotrichum orbiculare (ex Colletotrichum lagenarium)</i>	Anthraxnose	Co	2	IR		
		<i>Colletotrichum orbiculare (ex Colletotrichum lagenarium)*</i>	Anthraxnose	Co	3	IR		
		<i>Verticillium dahliae</i>	Verticillium wilt	Vd		IR		
		<i>Verticillium albo-atrum</i>	Verticillium wilt	Va		IR		
		<i>Phomopsis sclerotoides</i>	Black root rot	Ps		HR		
		<i>Rhizoctonia solani</i>	Rhizoctonia root & crown rot	Rs		IR		
		Nematode	<i>Meloidogyne incognita</i>	Root-knot	Mi		IR	
			<i>Meloidogyne javanica</i>	Root-knot	Mj		IR	
Rootstock, Pepper	Tobamovirus group	<i>Tobamovirus (ToMV, TMV, PMMoV)</i>		Tm	0	HR	Tm:0	
		<i>Tobamovirus (ToMV, TMV, TMGMV, PMMoV)</i>		Tm	0, 1	HR	Tm:0,1	
		<i>Tobamovirus (ToMV, TMV, TMGMV, PMMoV)</i>		Tm	0, 1, 1.2	HR	Tm:0-2	
		<i>Tobamovirus (ToMV, TMV, TMGMV, PMMoV)</i>		Tm	0, 1, 1.2, 1.2.3	HR	Tm:0-3	
	Fungi	<i>Phytophthora capsici</i>	Buckeye fruit & root rot	Pc		IR		
	Nematode	<i>Meloidogyne arenaria</i>	Root-knot	Ma		IR	Resistance can be adversely affected at elevated soil temperatures (>28°C)	
		<i>Meloidogyne incognita</i>	Root-knot	Mi		IR		
<i>Meloidogyne javanica</i>		Root-knot	Mj		IR			
Rootstock, Tomato	Viruses	<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV	0	HR		
		<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV	1	HR		
		<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV	2	HR		
		<i>Tomato spotted wilt virus</i>	Tomato spotted wilt	TSWV		IR		
	Bacteria	<i>Ralstonia solanacearum</i>	Bacterial wilt	Rs		IR		
	Fungi	<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	A	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	B	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	C	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	D	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	E	HR		
		<i>Fusarium oxysporum f.sp. lycopersici</i>	Fusarium wilt	Fol	0	HR	In USA called Fol:1	
		<i>Fusarium oxysporum f.sp. lycopersici</i>	Fusarium wilt	Fol	1	HR	In USA called Fol:2	
		<i>Fusarium oxysporum f.sp. lycopersici</i>	Fusarium wilt	Fol	2	HR	In USA called Fol:3	
		<i>Fusarium oxysporum f.sp. radicle-lycopersici</i>	Fusarium crown & root rot	For		HR		
		<i>Phytophthora infestans</i>	Late blight	Pi		IR		
		<i>Verticillium dahliae</i>	Verticillium wilt	Vd	0	HR	In USA called Vd:1	
		<i>Verticillium albo-atrum</i>	Verticillium wilt	Va	0	HR	In USA called Va:1	
	<i>Pyrenochaeta lycopersici</i>	Corky root rot	Pl		IR			
	Nematode	<i>Meloidogyne arenaria</i>	Root-knot	Ma		IR	Resistance can be adversely affected at elevated soil temperatures (>28°C)	
		<i>Meloidogyne incognita</i>	Root-knot	Mi		IR		
<i>Meloidogyne javanica</i>		Root-knot	Mj		IR			

HR: High Resistance | IR: Intermediate Resistance

Crop	Type	Scientific name pathogen ISF	English name	Code	Races/ Strains	Level of resistance	Remark	
Spinach	Viruses	<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV		HR		
		Fungi	<i>Albugo occidentalis</i>	White rust	Ao		IR	
			<i>Cladosporium variabile</i>	Leaf Spot	Cv		IR	
			<i>Colletotrichum dematium</i>	Anthraxnose	Cd		IR	
			<i>Peronospora farinosa f.sp. spinaciae (ex. Peronospora effusa)</i>	Downy mildew	Pfs	1-19	HR	
Squash, Summer	Viruses	<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV		IR		
		<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV		IR		
		<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV		IR		
		<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV		IR		
		<i>Squash leaf curl virus</i>	Squash leaf curl	SLCV		IR		
	Fungi	<i>Podosphaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px		IR		
Squash, Winter	Viruses	<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV		IR		
		<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV		IR		
		<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV		IR		
		<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV		IR		
	<i>Squash leaf curl virus</i>	Squash leaf curl	SLCV		IR			
	Fungi	<i>Podosphaeria xanthii (ex Sphaerotheca fuliginea)</i>	Powdery mildew	Px		IR		
		<i>Golovinomyces cichoracearum (ex. Erysiphe cichoracearum)</i>	Powdery mildew	Gc	1	IR		

HR: High Resistance | IR: Intermediate Resistance



Crop	Type	Scientific name pathogen ISF	English name	Code	Races/ Strains	Level of resistance	Remark	
Tomato	Viruses	<i>Beet mild curly top virus</i>		BMTCV		HR		
		<i>Beet Severe Curly Top Virus</i>		BSTCV		HR		
		<i>Tomato apex necrotic virus</i>	Tomato apex necrotic virus	ToANV		HR		
		<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV	0	HR		
		<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV	1	HR		
		<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV	2	HR		
		<i>Tomato spotted wilt virus</i>	Tomato spotted wilt	TSWV		IR		
		<i>Tomato torrado virus</i>	Tomato torrado virus	ToTV		HR		
		<i>Tomato yellow leaf curl virus</i>	Tomato yellow leaf curl	TYLCV		IR		
	Bacteria	<i>Pseudomonas syringae pv. tomato</i>	Bacteria speck	Pst		HR		
		<i>Ralstonia solanacearum</i>	Bacteria wilt	Rs		IR		
		<i>Xanthomonas campestris pv. vesicatoria</i>	Bacteria spot	Xcv		HR		
	Fungi	<i>Alternaria alternata f.sp. lycopersici</i>	Alternaria stem canker	Aal		HR		
		<i>Alternaria solani</i>	Early blight	As		HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	A	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	B	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	C	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	D	HR		
		<i>Fulvia fulva (ex Cladosporium fulvum)</i>	Leaf mold	Ff	E	HR		
		<i>Fusarium oxysporum f.sp. lycopersici</i>	Fusarium wilt	Fol	0	HR	In USA called Fol:1	
		<i>Fusarium oxysporum f.sp. lycopersici</i>	Fusarium wilt	Fol	1	HR	In USA called Fol:2	
		<i>Fusarium oxysporum f.sp. lycopersici</i>	Fusarium wilt	Fol	2	HR	In USA called Fol:3	
		<i>Leveillula taurica (anamorph: Oidiopsis sicula)</i>	Powdery mildew	Lt		HR		
		<i>Oidium neolyopersici (ex Oidium lycopersicum)</i>	Powdery mildew	On		IR		
		<i>Phytophthora infestans</i>	Late blight	Pi		IR		
		<i>Pyrenochaeta lycopersici</i>	Corky root rot	Pl		IR		
		<i>Stemphylium solani</i>	Gray leaf spot	Ss		IR		
		Verticillium	<i>Verticillium dahliae</i>	Verticillium wilt	Vd	0	HR	In USA called Vd:1
			<i>Verticillium albo-atrum</i>	Verticillium wilt	Va	0	HR	In USA called Va:1
	Nematode	<i>Meloidogyne arenaria</i>	Root-knot	Ma		IR	Resistance can be adversely affected at elevated soil temperatures (>28°C)	
		<i>Meloidogyne incognita</i>	Root-knot	Mi		IR		
		<i>Meloidogyne javanica</i>	Root-knot	Mj		IR		
Abiotic Stress	<i>Silvering</i>		Si		T			
	<i>Blossom End Rot</i>		BER		T			
	<i>Blotching</i>		Bl		T			
	<i>Cracking</i>		Cr		T			
Watermelon	Viruses	<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV		IR		
		Fungi	<i>Colletotrichum orbiculare</i>	Anthraco-nose	Co	1	IR	
			<i>Fusarium oxysporum f.sp. Niveum</i>	Fusarium wilt	Fon	0, 1, 2	IR	

HR: High Resistance | IR: Intermediate Resistance | T: Tolerance

**High Resistance (HR):**

Plant varieties that highly restrict the growth and development of the specified pest or pathogen under normal pest or pathogen pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest or pathogen pressure.

**Intermediate Resistance (IR):**

Plant varieties that restrict the growth and development of the specified pest or pathogen, but may exhibit a greater range of symptoms or damage compared to highly resistant varieties. Intermediate resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar conditions.

**Tolerance (T):**

The ability of a plant variety to endure abiotic stress without serious consequences for growth, appearance and yield.

# Vitalis Organic Seeds

US & CANADA



**Shaina Bronstein**  
Area Sales Manager  
+1 831-737-0525  
s.bronstein@enzazaden.com



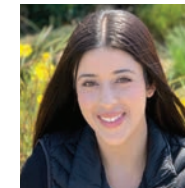
**Luke Donahue**  
Product Developer  
+1 207-383-6093  
l.donahue@enzazaden.com

## Customer Service

US & CANADA



**Jessica Taylor**  
Customer Service Manager  
+1 831-320-6555  
j.taylor@enzazaden.com



**Guadalupe Flemate**  
Customer Service Representative  
+1 831-484-4754  
g.flemate@enzazaden.com



**Angela Hernandez**  
Customer Service Supervisor  
+1 831-206-9787  
a.hernandez@enzazaden.com



**Kay Sorenson**  
Customer Service Representative  
+1 831-809-0891  
k.sorenson@enzazaden.com



**Ashley Butler**  
Customer Service Representative  
+1 831-320-2684  
a.butler@enzazaden.com

**Terms & Conditions of Sale:**

The general Terms & Conditions of Enza Zaden USA, Inc. apply to all contracts entered into by Vitalis Organic Seeds. The general Terms & Conditions are available from each authorized Enza Zaden USA and Vitalis Organic Seeds distributor upon request and can be seen at [www.vitalisorganic.com](http://www.vitalisorganic.com).

Our organic seeds are distributed through select distributors throughout North America. A list of our distributors can be found at [www.vitalisorganic.com](http://www.vitalisorganic.com) or by contacting our Customer Service Department toll-free at **1-855-800-ENZA (3692)**.



#### US Main Office

7 Harris Place  
Salinas, CA 93901 USA  
T +1 855-800-ENZA (3692)  
T +1 831-753-6141  
F +1 831-754-2975  
E [customer.service@enzazaden.com](mailto:customer.service@enzazaden.com)



#### Netherlands Main Office

Vitalis Biologische Zaden  
Hengelderweg 6  
NL 7383 RG Voorst  
The Netherlands  
T +1 31 (0)575-502-648  
W [www.vitalisorganic.com](http://www.vitalisorganic.com)

ENZA ZADEN



Vitalis Organic Seeds are distributed in  
the US & Canada by Enza Zaden USA, Inc.

This catalogue was printed by a Green Certified  
printer on recycled paper and with eco-friendly ink.