

# Rijk Zwaan Seeds & Services



Baselga RZ is an ideal variety in summer  
Emperador RZ rootstock “brings out the best” in our tomato crop  
Picowell RZ gives good-quality mini cucumbers



Dave Pratt, grower at  
Sunmaster Greenhouses:

“Baselga RZ gives  
the right-sized,  
quality fruit”



**“Baselga RZ is a great variety. It sets easily and is highly productive. The fruits have the right size, a thick wall and keep their shape during hot periods.” Dave Pratt is very positive about Baselga RZ, the yellow pepper he produces for the first time.**



**Sunmaster Greenhouses**  
GRANDE POINTE,  
ONTARIO

### ■ Baselga RZ

Area:	6 acres
Sowing date:	25 October 2007
Planting date:	3 December 2007
Growing medium:	coconut fibre
Stem density:	6.8 stems/m <sup>2</sup>
Average fruit weight:	230 –240 g
Yield up to week 28:	16.75 kg/m <sup>2</sup>

This year Sunmaster grows yellow peppers, last year they produced red peppers and next year the colour will be orange. “That’s the way our clients’ marketing system works. With a group of growers we are in a rotating system. Growing different varieties each year makes it very interesting for me. Baselga is a vegetative crop that you can hit hard with generative actions. That suits me for the growing strategy. If you create the right generative climate, it stays very well balanced and gives generative flowers. It also suits our climate, which can be quite extreme with high temperatures during the summer months. In December and January it was very cloudy. Baselga is not very light-sensitive and sets the first flush very easily.” Having a knowledgeable consultant helps in growing a successful crop.

#### Generative approach

How does Dave Pratt get this generative climate? “In the beginning, you have to keep up the speed with 24-hour temperatures of not lower than 20°C. I tend to make day/night differences of 8 to 10°C. If the temperature is too flat, you get too much growth. The pre-midnight shouldn’t be too low, because then you have to deal with quality issues. If the fruit load is high enough I take out the pre-midnight. With this regime the canopy stays well balanced and

the fruit load is 35 to 40 over 7 stems, which is perfect for me.” The watering strongly depends on the light and outside temperature. On a warm, sunny day in spring Dave waters 4 to 5 litres/m<sup>2</sup>, but with lower temperatures and dark weather, it is much less. In summer the irrigation starts at 8.30 am and stops at 6.30 pm. “On a sunny day I water 9.5 to 10.5 litres and I’ll keep 45% run-off.” The EC in the bag is around 3.0. In summer he allows the EC to drop to 2.8. CO<sub>2</sub> is used consistently from 7.00 am until 3.30 pm, unless temperatures exceed 32°C.

#### Right size

The outcome of this approach is very satisfying. Dave Pratt: “The production is high. We are 1.5 kilos ahead of last year (up to week 28). The ripening speed of the fruit is very fast. Besides that, Baselga gives quality fruits. Even in hot periods the fruits hold their nice shape with four shoulders. A main advantage is that Baselga is very resistant to blossom end rot. And because of the large leaves the canopy produces, the fruit is well protected from sun scorch. Last but not least, the fruits have a thick wall and easily attain the right size. Because we serve the North-American market, the weight of 230-240 grams I achieve is perfect.” ☺

André Leendertse, grower at  
VanderMeulen Greenhouses Inc.:

“Baselga RZ is the best yellow pepper variety at the moment where colour and shelf life are concerned”



**“We grow Baselga RZ because it produced at least 10% more in my trials last year than the standard variety at that time. At the moment it is the best variety. Its shelf life is good and the colour stays bright yellow,” says André Leendertse. He is manager/grower at VanderMeulen Greenhouses Inc., a 5-ha nursery where three different pepper colours are grown.**

“We grade our own product. Baselga gives the fewest problems. It is an ideal variety in summer. I think the shape is not quite so good but for our market the beautiful, bright yellow colour is more important than shape.” At the start of the crop I did make the mistake of using lower pre-midnight temperatures, by the way. That shows up as a lot of seedless peppers and deterioration in the quality of the fruit. By growing the variety differently now, the crop is doing just fine.”

André Leendertse retains three main stems per plant which are tied separately to the crop wire. “The average fruit weight is 205 g and the weight never dropped below 195 g throughout the season, up to mid-July.” The fruit load curve of Baselga fluctuates from 22 to 35 fruits per m<sup>2</sup>.

#### Watering

André Leendertse does not water during the night. That is not necessary in his opinion. “The moisture content of the growing medium does drop

during the night, but not enough to cause problems.”

He starts watering two hours after sun up. “After the last watering round it takes a minimum light sum for the first watering round to start the next day. In summer that is 500 joules for instance.” The total volume of water goes up as the year progresses and the amount of light increases. “I start at 1.5 times the light sum and in summer take it to 2.5 times the light sum. One watering round is 100 ml per plant.”

He starts with an EC of 2.8 and reduces it by 1 EC at midday. In extreme cases, with a high temperature and insolation, he shaves off another 0.2-0.3. The average EC works out at 2.1. The EC in the slab averages out at 3.2-3.3.

#### Temperatures

“The average night temperature is 19.5°C and the day temperature, in summer, is 25°C. That translates into a 24-hour temperature of 23.5°C. In spring I do not use a pre-midnight decrease but in summer, when it is warm, I do, as it would get too hot

otherwise. My lowest pre-midnight temperature set point is 19°C. Towards the morning the temperature is often 20.5°C and the day temperature around 21.5°C. At the end of the day I give an extra temperature boost to keep the plants active with a temperature set point of 22.5/23°C.

I do not use huge day/night differentials or a big drop in the pre-midnight temperature compared with other varieties. Baselga sets very easily, so I do not need to push it. ☺



**VanderMeulen  
Greenhouses Inc.**  
ABBOTSFORD, BRITISH COLUMBIA

#### ■ Baselga RZ

Area:	5 ha; 1 ha yellow Baselga
Sowing date:	1 November 2007
Planting date:	11 December 2007
Growing medium:	sawdust in bags
Stem density:	7.2 stems/m <sup>2</sup> ; three stems per plant
Average fruit weight:	205 g



### Cedar Line Greenhouses DRESDEN, ONTARIO

#### ■ Baselga RZ

Area:	16 acres
Sowing date:	1 October 2007
Planting date:	26 November 2007
Growing medium:	coco fibre
Planting distance:	6.8 stems per m <sup>2</sup>
Average Fruit weight:	243 g
Yield week 28:	15,3 kg/m <sup>2</sup>

Hilco Tamminga, grower at Cedarline Greenhouses:

## “Baselga RZ is very well balanced”

**It is the first time Hilco Tamminga grows the yellow sweet pepper Baselga RZ. He is very positive about this variety. “If I have to describe Baselga RZ in a nutshell, it is a fast and balanced plant, that is capable of producing quality fruits.”**

Hilco is very favourable about Baselga. “It is a vegetative crop, and yet an easy setter. The plant is balanced and fast and capable of producing quality fruit. Because we produce sweet peppers for the North-American market, the size of the fruit has to be large to satisfy the consumer. The average size of 243 grams is a good fit for this market. Most of the fruits are adequate for the XL or XXL sizes. Further the quality of the fruit is good and the variety seems to quite resistant to BER”

#### High temperature

The way Hilco is growing Baselga is quite fast and generative. “The 24 hr/temperature in the spring should be about 21-21.5°C. We had to run it a bit cooler this year for various reasons in the early stages, about 20.5°C. Looking back, I think that was too cool. We had some quality issues to deal with because of that, as the fruit

had a tendency to be squatty in the first set.

Hilco never uses a strong prenight. “In spring, we had a small prenight of 18.5°C. It does set easily and has regularity in its setting, so we did not need to make a bigger day/night difference.”

The watering is dependant on the time of year and time of the day. “We tend to water carefully in the early part of the day, while being more aggressive in the mid-day, and again slowing up towards the end of the day. We adjust the EC for the 1st and last irrigation periods, while looking for 30-40 % drain at the end of the day”.

#### Pleased

Hilco is very pleased with the production he achieved with this variety. “We are having a favourable growing season without great extremes. Nevertheless I am very satisfied with the production figure of 15.3 kg per m<sup>2</sup> by week 28. Baselga is a variety that is balanced, showing a consistent fruit load from week to week. In the spring the fruit load was 27 to 28 fruits per m<sup>2</sup>, but ramped up between 30 and 34 fruits per m<sup>2</sup> after week 20. That is very productive. If I am growing yellow again next year, which depends on the team of growers I am part of, I am certain I will choose this one again. In that case, I will add some more speed in the beginning of the season.” ☺



### Sunselect Greenhouses DELTA, BRITISH COLUMBIA

#### ■ Baselga RZ

Area:	10 acres
Sowing date:	21 November 2007
Planting date:	2 January 2008
Growing medium:	coconut fibre
Stem density:	7.5 stems/m <sup>2</sup>
Average fruit weight:	230 g
Yield up to week 28:	16 kg/m <sup>2</sup>

Pete Berkel, Sunselect Greenhouses:

## “Baselga RZ keeps its size, shape and weight”

**“A nicely balanced crop to work in, with very easy setting.” Pete Berkel, manager in Delta, British Columbia, does not need many words to describe Baselga RZ. He is growing this yellow pepper for the first time and he is very pleased with it.**

Besides yellow peppers, Pete Berkel grows red peppers, beefsteak tomatoes, cucumbers and mini cucumbers at this 16-ha greenhouse in Delta, British Columbia. “Speed is very important. In the beginning it needs a 24-hour temperature of not less than 22°C. Otherwise it tends to give a higher percentage of peppers with the wrong shape which we saw in our colder areas of the greenhouse. But after the first setting, we did not have much of that problem anymore.”

#### Very balanced

Pete Berkel considers Baselga to be a well-balanced crop that, in general, should be steered generatively. “Beside temperature, water management is very important. We were careful with the watering in the beginning, to get the setting right. In spring we water 1.5 to 2 times the amount of light in joules, in summer we give approximately 2.5 times the amount of light in joules. The EC in the feed is 2.5; we aim for an EC of 3.0 in the run-off.”

The results are satisfying. “After the first setting, Baselga’s size, shape and weight were very good. We are looking for a XL size. With Baselga, this year to date we have achieved 84% in XL or XXL size. I am very pleased with it and so we will grow Baselga again next year.” ☺

Robert Mastronardi, manager at Cedar Beach Acres:

## “The advantage of Orangery RZ is its large size”

**Robert Mastronardi, manager at the six hectare Cedar Beach Acres greenhouse, is cultivating a crop of Orangery RZ and Baselga RZ this summer. “This will be the first season we have been growing these varieties, both of which have very similar characteristics. A noticeable difference is that Baselga RZ has a slightly higher yield.”**

### Size matters

In particular, Mastronardi has been impressed by the large fruit produced by both Orangery and Baselga. “We have measured the average weight at around 230 grams. Most of our

customers are in the USA, where large peppers are favoured over smaller ones,” he says. “The fruits of both varieties have a thick wall and a long shelf life.”

### Climate conditions

In the unstable climate of southern Ontario, Mastronardi needs to monitor his irrigation strategy carefully. “Temperature and light can fluctuate significantly on a daily basis, and even on overcast days our joule readings can be quite high. So we have to stay on the ball and adjust our regime accordingly.” Throughout the season, Mastronardi maintains an EC level of 2.5 during feed, 3.0 in the slab and 3.7 in the drain. ☉

Ruud Graat, grower at SunSelect Produce:

## “Shelf life and Tm3 resistance major plus points of Orangery RZ”

**“We grow for the American market and it demands large, glossy peppers of at least 200 grams, which also must have a long shelf life. Add to that Tm3 resistance and you will understand why we grow Orangery RZ,” says Ruud Graat, head grower at SunSelect Produce in Aldergrove, British Columbia, not far from Vancouver.**

“We grow all sorts of peppers here under 12 ha glass, 5.5 ha of which are down to Orangery. We are doing that for the third year running. The big advantage of this variety is its Tm3 resistance, which is an absolute must here. Last year, and now again this year, there are quite a few outbreaks on greenhouses in the area. The virus is pretty aggressive,” Ruud Graat relates. “Other plus points of Orangery are the shape and colour. It is just a spectacularly beautiful pepper. It colours evenly, has that lovely gloss and a long shelf life. That last aspect is very important for us, as the peppers can sometimes be underway for five days.”

### Keeping it generative

The growing regime is aimed at keeping Orangery generative. “We use a lower pre-midnight of 16°C to get the size. We also keep the EC in the slab at around 3.0 and at 2.0 in the irrigation water. In order to encourage flowering we slightly reduce the amount of water we give as well. The night temperature is naturally low here, due to our proximity to the Pacific Ocean which is, of course, a good thing. But during the daytime the temperature can reach 30°C for quite a while, so in summer we apply shading to the roof. That takes the temperature down by one degree but it also prevents blossom end rot. If you take that into account, Orangery performs outstandingly.” Graat expects a yield of 25 kg/m<sup>2</sup> by the end of the year, 5% of which for the domestic market. “But if we had not had that bad weather in April and May this year, the variety would have yielded 26 or 27 kilos.” ☉



**Cedar Beach Acres**  
KINGSVILLE, ONTARIO

### ■ Orangery RZ and Baselga RZ

Area:	6.3 ha
Sowing date:	08 November 2007
Planting date:	14 December 2007
Grow medium:	coco fibre
Planting distance:	3.7 plants/m <sup>2</sup>
Average fruit weight:	220 - 240 grams
Yield week 29:	12-13 kg/m <sup>2</sup>



**SunSelect Produce**  
ALDERGROVE,  
BRITISH COLUMBIA

### ■ Orangery RZ

Area:	5.5 ha
Sowing dates:	22 October and 28 November 2007
Planting dates:	13 December and 29 December 2007
Growing medium:	yellow/red cypress wood chips
Plant/stem density:	3.3 plants/m <sup>2</sup> ; 3-2-2-stem system (7.7 stems/m <sup>2</sup> )
Average fruit weight:	220 - 230 g
Yield up to 15 July:	10 kg/m <sup>2</sup>



### Cornies Farms KINGSVILLE, ONTARIO

#### ■ Addison RZ

Area:	6 ha
Sowing date:	4 – 25 March
Planting date:	26 March – 15 April
Growing medium:	rockwool
Plant density:	1.8 plants/m <sup>2</sup>
Yield after 13 weeks' cutting:	57 cucumbers/m <sup>2</sup>

## James Cornies of Cornies Farms: “Addison RZ is quick to start producing and is strong against a lot of diseases”

**James Cornies of Cornies Farms (6 ha) is growing cucumber variety Addison RZ for the third consecutive year. “Addison RZ gives a high yield and there are no problems with diseases like fungal disease oidium. Cucumber Green Mottle Mosaic Virus is a problem in our area, but the symptoms do not appear until the end of the crop and there does not seem to be any yield reductions.”**

James Cornies is the third generation of growers who have grown cucumbers on Cornies Farms since 1950. He grows his quality cucumbers for the North-American market. He packs them on his own nursery, in the packaging required by the supermarket chains, which he supplies via three distribution companies. “I always have a few trial rows with other varieties on the go. This is the third consecutive year we have chosen the variety Addison, because of its high yield.”

#### Easy variety

“The crop starts vegetatively and ends very generatively. In the area where we are, light levels are high and vegetative growth is a distinct advantage.” In the daytime the grower maintains a temperature of 21°C and during the night, 18-20°C. “We maintain a day/night differential of 1-3°C. My

experiences with drastic reductions in the pre-mid-night temperature are not at all good.”

James Cornies starts watering two hours after sunrise and continues until two hours before sunset, 100-125 ml per watering round, based on light levels of 85-100 joules. He also waters during the night, if necessary. “Whether we water extra during the night depends on the amount of run-off and whether the EC is rising too much. We water during the night not only in the summer, but in winter as well. The rockwool also dries out when we have the heating on.” The EC of the feed solution depends on the stage the crop is in. “The EC in the growing medium varies from 2.0 to 3.5. The EC in the feed solution is somewhere between 2.0 and 3.0.”

#### Well-paid medium cucumbers

Production is good: 57 cucumbers per square metre, all Class I. “The medium cucumbers fetch the most money. We also have a market for small cucumbers.” Transferring from cutting stem fruits to lateral fruits creates a harvesting peak. “The fruit load is highest in May, June and July. When the fruit load is too high, we do some thinning out.” This season the fruit colour turned a little lighter around week 8 and there was a short period when the cucumbers were not quite so good. “The cause is unknown. In spite of that temporary problem we are still getting a large number of good cucumbers.” ☉



### Westland Greenhouses RED CLIFF, ALBERTA

#### ■ Addison RZ

Area:	400,000 sq ft
Area cucumbers:	95,000 sq ft
Sowing date:	mid-May
Planting date:	end May
Growing medium:	coco fibre
Plant density:	1.5-1.8 plants/m <sup>2</sup>
Yield up to mid-July:	25 - 29 pieces/m <sup>2</sup>

Rob van Dam of Westland Greenhouses:

## “Addison RZ gives good, medium-sized cucumbers”

**Brothers Rob and Ralph van Dam are growing Addison RZ for the third consecutive year at their Westland Greenhouses company. They use the variety for the second crop, which starts in May. “Growing Addison RZ is virtually trouble-free. The fruit length is good and cutting starts 2 – 3 days earlier,” says Rob van Dam, well-satisfied.**

Cucumber growing is in their blood. Twenty years ago the two brothers took the nursery over from their father, who started in cucumbers nearly forty years ago. The brothers grow three crops per year. The plants are grown in coco fibre. “Our target is the market for medium-sized cucumbers with a length of 13-14 inches. This length fetches the best prices.”

#### Plant balance

The grower is happy about the balance in the plants. “It is a generative crop. We are growing the variety for the third year now and have had no problems with the high summer temperature. Production last year came to 160 pieces per square metre. With our cutting system and the plants generative nature, we prevent large fluctuations in fruit size.”

#### Water

Van Dam starts watering 1.5 hours after sun up and continues until 1-1.5 hours before sunset. He gives around six litres of water per plant, or eight litres per square metre. The EC in the growing medium is 2.5-3.0. The EC in the feed, depending on the amount of light, is 2.3-2.5. ☉

Kurt Grass of Rainbow Acres Inc.:

# “Picowell RZ gives good-quality mini cucumbers with a good shelf life”



**Rainbow Acres Inc**  
LEAMINGTON, ONTARIO

**“Four years ago we switched from tomatoes to mini products,” Kurt Grass relates. Together with his wife Lina he owns the 10 acres of Rainbow Acres Inc. “We started with mini cucumbers. This year we added mini peppers. After several trials we now also have Picowell RZ since last year, because of its good yield, and the quality and shelf life of the cucumbers.”**

“We opted for mini products because the market demands them. We sell our products under the Sunset quality label of Mastronardi Produce.” Grass does not adhere to fixed sowing dates, but has 4-5 different zones on the nursery where he plants at different times in order to keep production as level as possible. One crop lasts 14-16 weeks. He plants every location three times. He keeps to the same plant spacing as he used for the tomatoes and estimates that he has a total of 12,000 plants per acre. “We use a 1-stem system here. During hot weather a plant must be able to sit on the slab in its own rockwool block.”

### Good steering

According to Grass, the market demands

cucumbers of 5-6.5 inches long, with a fruit weight of 110-120 g. “That means that we always have to know exactly what we are doing. Especially in winter, from November to March, it is difficult to make that size. When the weather is overcast for 3-4 weeks at a time, the cucumbers remain shorter. We do not use supplementary light, only natural light.” Grass is very happy again with Picowell this year. The only small minus point is its medium resistance to mildew. The grower never waters during the night in order to prevent guttation. “I usually start watering one hour after sunup and stop three hours before sundown. This is only more difficult to maintain in summer, when the weather is hot.” Grass gives about 12 litres per square metre. In difficult weather conditions the plants are given watering rounds lasting five minutes, or 160-165 ml per plant and if it is a little cooler, three minutes.

Grass tries to maintain the EC in the slab at 1.5-2.0, so he adds an EC of 2.0 to the feed.

### Happy balance

The grower uses a day/night differential of 2-3°C, depending on the weather. “I try and steer fruit set by allowing the temperature to drop rapidly

### ■ Picowell RZ

Area: 4 ha, 3.8 ha of which Picowell RZ

Sowing/planting dates: various

Plant spacing: 'tomato' spacing

Growing medium: rockwool

Average fruit weight: 110 g

Fruit length: 5 - 6.5 inches

to 17°C after sundown and letting it rise again gradually the next morning to a day temperature of 21-22°C. This enables me to strike a happy balance between vegetative and generative. Further steering is done with the ratios between the different fertilizers.” ☉

Ron Moes, manager at Windset Greenhouses:

# “Curtis RZ is strong but generative – necessary traits for high wire production”



**Windset Greenhouses**  
DELTA, BRITISH COLUMBIA

**“For the past three years, we have been growing Curtis RZ at our greenhouse not far from Vancouver,” says Ron Moes. “For the past two seasons, we have also been trialling Curtis RZ at our US location near Las Vegas, Nevada.”**

Different locations, different climate, British Columbia and Nevada have vastly different climate conditions, requiring variations in Moes’ treatment of Curtis. “The average summer temperature at our Canadian location is 22°C; in Las Vegas, temperatures can rise as high as 45°C. As a result, we start watering in Las Vegas earlier in the morning and stop watering later in the day. We also

have a limited night-watering regime in Vegas, which we do not do in Delta.” EC readings also differ slightly in both locations – between 1.8 and 2.0 in Las Vegas and around 2.3 in Canada.

### Strong and consistent

Moes says that Curtis produces a medium to large fruit, with very uniform quality and excellent colour. “In Canada, the plant tends to be more vegetative and not as naturally generative as in Vegas, as the climate in Delta is milder. The advantage of Curtis is that it maintains a consistent fruit length throughout the season, which is important when marketing the fruit to our customers.” ☉

### ■ Curtis RZ

Las Vegas  
Area: 12 acres  
Sowing date: 11 April  
Planting date: 10 May  
Growing medium: coco fibre  
Plant density: 2.8 plants/m<sup>2</sup>  
Yield this planting to week 29: 42 cucumbers/m<sup>2</sup>

Delta  
Area: 15 acres cucumbers  
Sowing date: 5 May  
Planting date: 3 June  
Growing medium: coco fibre  
Plant density: 2.6 plants/m<sup>2</sup>  
Yield this planting to week 29: 28 cucumbers/m<sup>2</sup>



Reg Proudfoot, hydroponic-  
lettuce grower at Lyalta Gar-  
dens greenhouse:

“Very happy  
with  
Alexandria RZ  
and Versai RZ”



**“Consistency in germination and the plant quality itself are the main reasons why we stick with Alexandria RZ and Versai RZ. They are perfect varieties for our system and climate,” says Reg Proudfoot, hydroponic-lettuce grower in Lyalta, a small community 30 miles from Calgary.**

Reg has used Rijk Zwaan lettuce varieties since he started his family business 15 years ago. “I was very fortunate to meet a fellow from Rijk Zwaan, who convinced me to grow their lettuce varieties. Well, it turned out to be very good business. Up to

this day we are sticking with Rijk Zwaan varieties. Alexandria and Versai are perfect for year-round production in our floating raft system and our climate,” says Proudfoot. His customers are two restaurants and a retailer in Calgary. The retailer is supplied directly, the restaurants via logistics providers.

The plants root directly in the water, using a computer-controlled EC of 2.0. The daytime temperature is kept at 16°C, the night temperature at 14°C. “In summer, daytime temperatures can rise to 30°C for two weeks or so, but we have never had problems with bolting. In the past we sometimes had tipburn, due to human error. But we have learned from our experiences.”



**Lyalta Gardens  
greenhouse**  
LYALTA, CALGARY

■ **Alexandria RZ** (butterhead lettuce)  
**Versai RZ** (red oakleaf lettuce)

Size of glasshouse: 3 ha

Sowing: weekly

Planting: weekly

Growing system: floating raft system

Plant spacing: 7 inches

Yield: 11,000 heads weekly

**100% germination**

“We sow, transplant and harvest every week. When we sow we use trays with 98 cells. Germination results are always 100%, even in summer. We try to keep germination conditions cool for 24 to 48 hours in a shaded part of our glasshouse to ensure good results. We have never had a problem with it,” says Proudfoot.

The seedlings are transplanted from soil-less propagation beds to the floating raft system, using a 7- inch planting distance in summer and winter. Production time in the winter is only a week longer than in summer, because of the favourable light conditions in Alberta.

**Rooted lettuce**

Production figures are 11,000 heads per week, of which 80 to 90% are Class I. The retailer is supplied with rooted lettuce, which is a big trend in Canada, says Proudfoot. “It keeps the lettuce fresh for three to five days longer and causes less damage and loss in the shops. The supply chain of our retailer in Calgary is also very good. Our customers get the freshest product possible. But without the strong varieties and know-how of Rijk Zwaan results would never be so good.”

Harry Augustijn, manager of the Rijk Zwaan tomato demonstration greenhouse in the Netherlands:

## “I am strict in my assessment”

**The demo greenhouse for Rijk Zwaan tomato varieties is a huge success. “This is already the fifth year for us. We started with 16 varieties, but we now have 48 trials on the go,” says manager Harry Augustijn.**



Visitors from China, Japan, Mexico, South Africa, the UK, France, Scandinavia, the Netherlands and, of course, Canada ... Growers, merchants and supermarket chains from all corners of the world know the way to Steenbergen in the Netherlands. How does Augustijn explain this success? “Five years ago Rijk Zwaan and I came up with this concept together. As an independent grower I try out new tomato varieties in practical conditions. I get paid for the work, naturally, but my agreement with Rijk Zwaan is that I am totally open, honest and clear about the positive and negative sides of a variety. I record just about everything, from plant length to man-hours per variety. On top of that I also assess the quality and shelf life on a weekly basis. I am strict in my assessment. All visitors get to see this information and they seem to appreciate it.”

### Passport

The object of the trials is to get a good picture of the varieties. Augustijn: “I explain to visitors that I want to have a kind of passport of each variety by the end of the season. Some varieties do not make the grade; if that is the case my advice is to stop recording any further information. Of the varieties that go through to the commercial phase I write a crop recipe at the end of the season, in collaboration with the Rijk Zwaan crop advisors. That is not all that easy, because you cannot steer each variety separately in the trial

glasshouse. But with our experience and using the recorded data we are able to build up a very good picture of the ideal steering a crop requires.” Are the trials interesting to Canadian growers as well, taking into account that they are working with a different climate and a different market from those in the Netherlands? “A lot of tomato varieties are successfully grown in diverse conditions. And, do not forget, Rijk Zwaan thinks globally when choosing varieties. We are trialling large truss tomato 72-479 RZ, for instance, which has a very large fruit size and is aimed specifically at the North-American and Canadian markets.”

### Successes

So, has Augustijn ‘discovered’ a new top variety in those five years? “Certainly. Capricia RZ, a tomato variety for the ‘medium truss’ segment is the best example. Its vigour was above average. The variety was remarkably strong during extreme weather changes. Capricia also turned out to be almost unsusceptible to splitting and in the end it was ahead in production by 2 kilos. It is now one of the main varieties in this segment.” And this year, too, Augustijn thinks there are a few very promising newcomers in the trials. Could he lift just a tip of the veil? “Midi plum tomato 72-141 RZ gives a very good production and has exceptionally strong green parts. Loose cherry tomato variety 72-138 RZ also achieves

an unprecedented production because it initiates double trusses very easily. In the large cocktail and large truss tomato segments I have also spotted promising varieties.”

### Judge for yourself!

Harry Augustijn extends a warm welcome to anyone interested in visiting the demo greenhouse to judge the varieties for themselves. “Visitors can make an appointment via Rijk Zwaan employees. They can come and visit any time throughout the season. Together with a Rijk Zwaan employee I speak to foreign visitors in English. So perhaps I will see you in Steenbergen!”

### Demo greenhouse in Steenbergen

- 48 trials on 7,000 m<sup>2</sup> with new or commercial Rijk Zwaan tomato varieties;
- segments: medium truss, small truss, large truss, cherry truss, large cocktail, small cocktail, midi plum truss, mini plum loose, cherry loose, medium loose;
- visitors can have sight of the comprehensive records per variety which include: plant length, fruit load, fruit weight, production, man-hours, Brix values and fruit quality after 4 and 10 days;
- anyone interested in visiting the demo greenhouse may do so by making an appointment, any time throughout the season. ☺



# Lycopene tomato nice and healthy

We all eat vegetables, because vegetables are healthy and they taste good. The 1,200 employees of Rijk Zwaan work to develop new vegetable varieties. We are very successful in crossing plants with the desired characteristics in order to create new vegetable varieties. Varieties which grow better, produce more, are even more resistant to diseases, more attractive, tastier and sometimes even healthier than they are already. One of the most popular vegetables in the world is the tomato. That is not really surprising, as tomatoes are full of flavour as well as being healthy. The fruit is full of substances which have a positive effect on the human body.

## Flavour

The flavour of tomatoes is determined by a number of factors. Sweetness, for instance, is expressed in the sugar content (Brix). Apart from the various sugars, acids, firmness and the moisture percentage in a tomato also play a significant part in determining its definitive flavour. These components are used in the comparative table alongside.

## Health

Tomatoes are rich in antioxidants; examples of these are vitamin C and lycopene. Vitamin C aids our natural resistance. Lycopene gives tomatoes their

lovely red colour. Lycopene would also appear to protect our DNA and be effective against various types of cancer.

In the last couple of years Rijk Zwaan has conducted research into the flavour and lycopene content of its tomato varieties. Here is a sample of that data. ☉

	Average brix	Average figure for flavour (PPO model)	Average lycopene (mg/100 gr)
Standard tomato			3,0
Mecano RZ	4,4	5,6	8,0
Capricia RZ	4,5	5,8	8,1
Elanto RZ	4,9	6,1	6,9
Amoroso RZ	7,1	7,2	10,5
Roterno RZ	5,1	6,5	8,5
72-140 RZ	6,9	6,4	10,5
72-141 RZ	7,0	7,0	9,0

These figures are averages and are based on a number of measurements taken during 2007/2008. The average Brix and figures for flavour originate from research by the PPO. The lycopene figures originate from RZ research.



## ■ 72-141 RZ

72-141 RZ is a new variety for the mini specialty tomato market. The fruits can be harvested as a cluster with even ripening. A sweet tasting specialty tomato with a plant habit suitable for greenhouse production.

Segment: mini plum/ roma cluster harvest

Resistances: ToMV/ Cf: 1-5/ Fol: 0,1/ For/ Va/ Vd/ Mi/ Si

Medium fruit weight: 35 grams

Generative plant, high production, excellent taste



## ■ 72-479 RZ

72-479 RZ is a new cluster tomato variety developed for large fruit size. The fruits can be pruned to 5 per cluster with even colour, shape and ripening in all the fruits.

The plant is more generative than previous Rijk Zwaan cluster varieties. The plants come into balance easily in the early stages. Still there remains a high amount of vigor for the long crop season. We expect that growers will graft onto a rootstock for best results.

Resistances: ToMV/ Cf: 1-5/ Fol: 0,1/ For/ Va/ Vd/ Si/ Sbl

Medium fruit weight: 150 grams

Strong generative plant, high production, good tasting tomato

Chad Brian, the grower at Policella Farms:

## “Big Power RZ is fantastic”

For the past three seasons, Policella Farms has been using Big Power as rootstock for its Grandella crop. “Big Power is a highly generative rootstock; when combined with the vegetative qualities of Grandella, it contributes to vigorous growth. Another advantage we have noticed is that Big Power helps to minimize blossom end rot, as it stimulates the distribution of nutrients and available water for vegetative plants at high temperatures.”

### Strong root structure

In the past, Chad has used the MaxiFort rootstock. “When you compare MaxiFort with

Big Power, we have noticed that root growth in the initial stages is slower with Big Power. However, over the long term, it produces a stronger and larger root mass.”

### Rootstock trials

At the moment, Chad is also trialling two additional RZ rootstock varieties: 61-067 and 61-068. “We have two rows of each of these rootstocks, including around 500 Grandella plants,” Chad says. “Similar to Big Power, both of these varieties produce a strong root system.” ☉



**Policella Farms**  
LEAMINGTON, ONTARIO

### ■ Big Power RZ

Area:	10 acres
Sowing date:	1 December 2007
Planting date:	15 January 2008
Growing medium:	coco fibre
Plant density:	2.8 plants/m <sup>2</sup>

Wim van der Torre, grower at Houweling's Nursery:

## “Brioso RZ and Emperador RZ: a great match”

Houweling is one of only a few North-American glasshouse growers producing tomatoes year-round. Grower Wim van der Torre: “I run 22 acres of the Delta Division, partially a propagation greenhouse. 7 acres are permanently used for propagation of greenhouse vegetables and 15 acres are used for 12 weeks propagation and then we grow tomatoes for 40 weeks. This season we are trying out 600 Emperador rootstocks with Brioso grafted onto them. Brioso is a cocktail tomato with a very sweet taste. So far this seems very promising. Emperador is the first really good alternative to Maxifort and it brings out the best in Brioso”.

“I like to grow strong-generatively,” Van der Torre admits. “It is my style but it also fits the glasshouse best. Emperador is a highly generative rootstock with a good capacity for growth. You do not notice these qualities at the

“If Emperador remains consistent with our experience then we can say that this rootstock is ready from a propagation perspective for growers to take it to the next level”

Ruben Houweling, Houweling Nurseries

beginning of the season, when you still have enough tools to control growth, but they become of major importance at the end. Especially later in the season, when it is more difficult to get the temperatures down at night, Emperador makes a difference. It is good at transporting water and nutrients to Brioso, even at high temperatures.

### Brioso RZ, a natural beauty

“At the beginning of the season we try to maintain some reserve capacity in generative Brioso. This does not create any problems

when it is grafted onto Emperador. Emperador gives Brioso the desired stem diameter and purple colouring which helps to obtain a better and even more stable yield, and it extends the production season. Emperador and Brioso

are a great match and it is difficult to go wrong with the crop. Brioso is also a very consistent performer. Setting is easy and very



**Houweling's Nursery**  
DELTA, BRITISH COLUMBIA

### ■ Emperador RZ/ Brioso RZ

Area:	1.5 acres with a trial area of Emperador RZ rootstock
Sowing date:	beginning of December 2007
Planting date:	8 January 2008
Growing medium:	coco fibre slabs
Planting distance:	48 cm (3.9 stems/m <sup>2</sup> )
Planting system:	alternating plants with two stems and one stem

regular. We always get wonderful trusses of eight identical tomatoes. The average weight of the tomatoes is 43 grams. We never miss a fruit, we have no split fruits or green tail ends”. Van der Torre concludes that Brioso is doing very well and is a natural beauty. ☉



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## Visit Rijk Zwaan at the Canadian Greenhouse Conference



This year's conference again promises to offer many attractions for the greenhouse vegetable industry. We invite you to visit our stand #319. You will find many of Rijk Zwaan's latest vegetable products on display. So whether you are looking for some information on a new variety or just want to say hello, we look forward to meeting you in Toronto.

The Canadian Greenhouse Conference runs October 8 and 9, 2008, at the International Centre, 6900 Airport Road, Mississauga, Ontario. For more information visit [www.canadiangreenhouseconference.com](http://www.canadiangreenhouseconference.com)

Rijk Zwaan's descriptions, illustrations, growing advices and any other information in whatever form for example on expiry, sowing, planting and harvesting dates are based as precisely as possible on experiences in trials and in practice. However, Rijk Zwaan does not accept in any case liability for damages resulting from the use of such descriptions, illustrations, growing advices and information. The buyer itself is responsible for proper storage of the seeds and will be deemed to determine whether the products and growing advices are suitable to be used for the intended cultivations and under the local conditions.



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Your response is very much appreciated.