

# Matthiola StoX<sup>®</sup> series

Matthiola incana

- **Evanthia's breeding breakthrough:** Japanese type stock with 100% selectability
- Robust, woody stems and outstanding vase life
- Broad colour spectrum with unique shades



Please contact us for more information: [evanthia.nl](http://evanthia.nl) | [sales@evanthia.nl](mailto:sales@evanthia.nl)

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**Matthiola StoX®** is Evanthia's brand new Matthiola series. This series offers the solution of a challenge breeders, young plant producers and growers of Matthiola face. Selection of double-flowered plants at the seedling stage is one of the main purposes of our stock breeding program. We managed to develop a robust range of Matthiolas with woodier stems that is easy to select for doubleness after a cold treatment, resulting in an excellent series with 100% double flowers. With this new series we truly combine the best of both worlds: the sturdy and long-lasting features of Japanese type stock and the selectability of European type stock. Check out the vibrant colour range, with some interesting, unique shades.

## Flower profile:

<b>Series:</b>	StoX®
<b>Genus &amp; species:</b>	Matthiola incana
<b>Family:</b>	Brassicaceae
<b>Common name:</b>	Stock
<b>Usage:</b>	Ornamental; commercial cut flower
<b>Stem length:</b>	65 to 70 cm
<b>Breeder:</b>	Evanthia Genetics
<b>Starting material:</b>	Raw seed



**StoX® Antique Rose**



**StoX® Champagne**



**StoX® Deep Rose**



**StoX® Rose Pink**



**StoX® Silver**



**StoX® White**



**StoX® Yellow**

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# Matthiola incana — Cultivation manual

## Cut flower culture

**Culture location:** greenhouse

**Sowing method** TP

**Sowing season** Early winter until late spring

**Germ temp.** 15-18°C (59-64°F)

**Growing temp.** 16-18°C (60-65°F) day  
13-16°C (55-60°F) night

### Plug crop time

3-5 weeks

### Crop duration

8-12 weeks with supplemental light,  
otherwise 9 to 16 weeks from planting

### Seed requirement

5 gr for 1000 plants

1 seed per plug

### Pests/diseases

Cabbage butterflies, caterpillars, thrips,  
aphids, clubroot, Sclerotinia, downy  
mildew, powdery mildew.

### Fertilization (f)

Nitrate-based fertilizer, low on N, low  
on P. Fertilize twice a week until  
harvest (175 to 225 ppm N/1.2-1.5 EC).  
Keep EC at 1.5-2.0 mmhos/cm and pH  
at 5,8 to 6,5. High pH (> 6,8) causes chlo-  
rosis.

## Cultivation tips

- Selectable types need a cold treatment: keep the double-flowering plants with pale green cotyledons (see sowing details).
- Matthiola is sensitive to Fusarium. When successively planted in the same year, sterilize (steam) the soil after the crop.

## Sowing details

### Pre-sow and transplant (TP):

Soil : sterile sowing mix

pH 5,5-6, EC 0.5

sow : 1 seed per plug (tray 288)

cover: yes

### Days 0 - 4

(m) moist

(t) 15-18°C (59-64°F)

(f) < 100 ppm N, < 0.7 EC

### Days 4 - 7 (for selectable series)

Use a cold treatment or short-day treat-  
ment to select for doubleness:

#### OPTION 1: Cold treatment:

Once germinated, keep at 4-5°C (41°F) for 4  
to 7 days, followed by 1 to 2 days at 16-18°C  
(60-65°F) in order to select the double-  
flowering light-green plants.

#### OPTION 2: Short-day treatment:

Create a short day environment. For Mat-  
thiola this means 11 hours of light and 13  
hours of darkness. Please note: when the  
night falls, open the screening to prevent  
heat accumulation. Make sure to close the  
screen before dawn.

Adjust the initiation of short days to the  
heat levels in the greenhouse.

### Days 7 - 14

(m) normal

(t) 15-18°C (59-64°F)

(l) 16.000-27.000 lux (1500-2500 fc)

(f) < 100 ppm N, < 0.7 EC

### Days 15 - 21

(m) dry - normal to dry

(t) 15-18°C (59-64°F)

(l) 27.000-54.000 lux (2500-5000 fc)

(f) 100-175 ppm N, < 0.7-1.2 EC

## Notes

- For best performing series in your climatic conditions, check the description with the series. In cooler climates Matthiola is only cultivated in the greenhouse.

## Growing on

### Soil/media

(deep) well-drained fertile soil, pH 5,5-  
6, 0,5 EC

### Netting

Netting is advised

### Pinching

No pinching needed

### Plants density

Summer 65-75 plants/m<sup>2</sup> (6-7 plants/ft<sup>2</sup>).

Winter: 65 plants/m<sup>2</sup> (6 plants/ft<sup>2</sup>).

### Moisture (m)

Plant in moist soil. Do not start (drip)  
irrigation too soon or the seedlings may  
get leggy. Moisture level 2-3. Keep dryer  
towards cutting stage.

### Temperature (t)

16-18°C (60-65°F) during the day, 13-16°C  
(55-60°F) at night. High heat (> 18°C)  
can stunt plants or prevent flower  
development. Too low temperatures will  
influence stem length.

### Light (l)

Not daylight sensitive, but supplemental  
lighting - 3000-6000 lux (280-560 fc) for 14-  
16 hours) enables late summer planting.

## Harvest

- Harvest when 4 to 5 flowers per stem are open.

For post harvest treatments, see:  
[www.vbn.nl/en/list-pre-treatments/](http://www.vbn.nl/en/list-pre-treatments/)

This information is for general guidance only, and is in some cases specific for North European conditions. No guarantee is given for the result of the crop, nor is liability accepted for the consequences of applying the indications given.