Thuja occidentalis ‘Smaragd’

- The quality of the plants is heavily influenced by the starting material you use. Start with high-quality young plants, strong roots, uniformity in design and good branching.
- Be aware that this crop is mainly propagated using cuttings, during the ‘dark’ months of the year. Cuttings require lower soil temperatures (Dec-Jan 14°C | Feb 16°C | March 17-18°C). In higher temperatures, callus production can be limited.
- As opposed to other Thuja occidentalis cultivars, Smaragd is not a massive grower. Therefore it is important to limit the application of water and fertilizers. Separate Thuja occidentalis ‘Smaragd’ on your nursery from for example Thuja occidentalis ‘Brabant’, because of their different needs.
- Take note of these tips to avoid salt-sensitivity during the rooting phase:
  - Avoid excesses in amounts of water and nutrition during the first months after potting.
  - Ensure the growing medium in the pots is constantly moist.
  - Balance the (greenhouse) climate as much as possible. Avoid peaks in humidity and temperature (see next item).
  - Apply balanced nutrition during every crop stage for healthier plants.
  - Two weeks and one week before transplanting: apply Peters Professional Plant Starter (10-52-10) to stimulate roots.
- Thuja occidentalis ‘Smaragd’ is sensitive to specific insects and diseases: implement a tight (mainly) preventive protection schedule to avoid these.
- Thuja occidentalis ‘Smaragd’ is mainly grown outdoors. If the plant is strong (hard) by wintertime, it usually resists winters very well.

**Crop Protection**

*Thuja occidentalis ‘Smaragd’*

*Thuja occidentalis ‘Smaragd’* is very sensitive to several pathogens and diseases:

**Sciara**
Can occur during the cutting period, especially because this crop takes a few months to root. The quicker roots are developed, the less problems.

**Aphids**
Mainly occurs on branches of older plants during springtime. Take care: these aphids are difficult to recognize.

**Wine Weevil (Othisorhynchus sulcates):**
Take preventive actions to avoid larvae in the pot.

**Twig diseases (Dydimella, Pestalotia, Kabatina):**
Take preventive actions during the entire culture (chemical, but also to avoid stress around pruning periods).
**Thuja occidentalis ‘Smaragd’**

**General information for cultivation:**

Thuja occidentalis production in pots can be divided into two main branches: a culture that is fully grown in pots and a culture where field-grown Thujas are transferred into pots for the finishing stage. The advice in this crop sheet applies to the pot culture. Total cultivation time from cuttings to sellable plants is 2-3 years.

**Cultivation cards:**

- **Growing medium and water**
  - Thuja occidentalis ‘Smaragd’ requires soil pH around 5.0-5.5.
  - Ensure constant moisture in the growing medium (no excesses).
  - Use a substrate that has good re-wetting and de-watering properties for strong root development.
  - Rooting is a crucial phase for Thuja. During this phase the crop is sensitive to EC peaks.
  - Also be careful with high amounts of urea.

- **Starting phase**
  - After potting, the goal is to ensure root development.
  - Control the EC levels in the pots (maximum 0.5 ms) during this stage.
  - For winter potting: we recommend the use of a water soluble compound starter fertilizer. Only use Osmocote Exact.
  - Recommended nutrition is a base rate of Osmocote Exact Protect or Osmocote Exact Hi.End (see next page).

- **Finishing phase**
  - Once the plants have rooted successfully, increase the fertilizer amount in the compound starter fertilizer. Only use Osmocote Exact.
  - Thuja occidentalis ‘Smaragd’ is sensitive to urea. It can cause tip burn in combination with high irradiation.

**Recommendations for cultivation**

### Cuttings | 104 cups/tray

**Thuja occidentalis ‘Smaragd’ slow growing**

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- **Winter:** Only possible between February – October. Also possible between February – April.
- **Cuttings:** Are ideally made in late September – October. If necessary, early April.
- **Rooting:** Once before winter: stimulate rooting with 5 g/m² Peters Professional Plant Starter (10-52-10). Repeat this action before transplanting in April.
- **Growth phase:** Universal Blue (18-11-18) 15 g/m² (maximum 2x in 14 days).
- **Finishing:** Universal Violet (10-10-30) 15 g/m²/week.

### Young plants | P 9 cm - P 11 cm

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- **Nutrition from Osmocote Exact Hi.End 5-6M**
  - Build a maximum of 5 l with water soluble starter fertilizer.
  - Add a maximum of 1.5 l with water soluble starter fertilizer.
  - Add a maximum of 0.5 g/l starter fertilizer.
  - Slow growing

### Finishing stage | C3 L pot (or larger)

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- **Nutrition from Osmocote Exact Hi.End 8-9M**
  - Additional nutrition via irrigation
  - Finishing: 15-20 g/m²/week Universal Blue (18-11-18).

For a tailored advice for your situation, please contact your ICL Specialty Fertilizers advisor. As circumstances can differ and as application of products is beyond our control, ICL Specialty Fertilizers cannot be held responsible for any negative results. Before a new rate, product or application method is used, a small-scale trial is recommended.
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Tips & Tricks

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