Simple Soil-less Gardening

Leafy Greens Year Round
Joe Theisen

2020 PBS Wisconsin Garden Expo
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Simple Soil-less Gardening

Learn how to grow leafy greens year round with a simple form of soilless gardening. All the steps will be demonstrated.
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Learn how to grow **lettuce** year round with **the Kratky method**.
All the steps will be demonstrated.
Kratky ...

… is the Simplest form of Soil-less Gardening
Kratky

The only moving part is the plant

Kratky Method Of Hydroponics

As the plant grows, the water level drops, providing the roots with more oxygen.
Kratky: Passive Hydroponics
Set it and forget it.
Proposed in 2009 by
Prof. B.A. Kratky, U of Hawaii
B.S. in Agronomy from U of Wisconsin
Lettuce ... 

... is the best plant to use with the Kratky method
Lettuce in Kratky
It’s all about the roots.

Roots need oxygen.
Lettuce tolerates low levels of oxygen.
Steps in the Growing Process

- Soak the **Seeds** in water.
  Seeds germinate in about 2 to 4 days.
- “Plant” the seeds in the growing **Medium**.
- Place in a well **Lit** humid **Microclimate** for about 7 to 10 days to allow the roots and leaves to develop.
- Introduce a **Nutrient Solution** to grow to maturity.
- Harvest the Lettuce. Clean the medium for reuse. **Total Time** is about 7 weeks.
Let’s Demonstrate the steps...

1. Soak the **Seeds** in water. Seeds germinate in about 2 to 4 days.
Let’s Demonstrate the steps...

2. “Plant” the seeds in the growing Medium.
Let’s Demonstrate the steps...

3. Place in a well Lit humid Microclimate for about 7 to 10 days to allow the roots and leaves to develop.
Let’s Demonstrate the steps...

4. Introduce a **Nutrient Solution** to grow to maturity.
Let’s Demonstrate the steps...

5. Harvest the Lettuce. Clean the medium for reuse.

Total **Time** is about 7 weeks.
Elements in the Process

- Seed
- Water
- Oxygen
- Light
- Nutrients
- Medium
- Environment / Microclimate
- Time
Steps in the Process

- Seed germination
- Root development
- Leaf development
- Nutrient source
- Light source
- Micro-climate
- Maintenance
- Economics
These slides are a summary of the presentation. If you need more details, contact information is on the last slide.
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