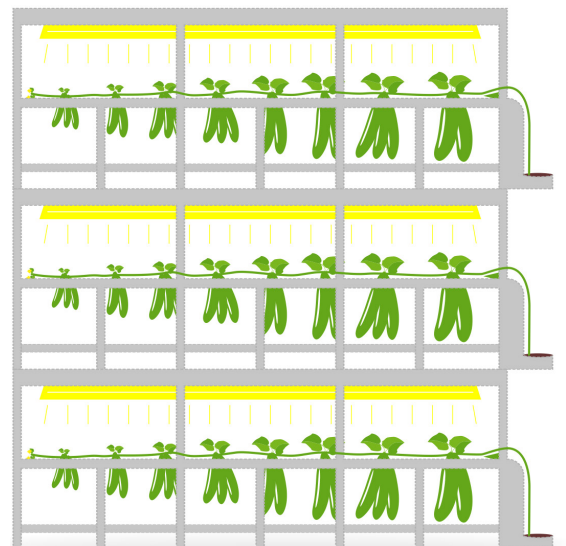




Novel vertical farming solution for high-wire crops by Luke

Vertical farming and plant factories are suggested to be among the key solutions in providing food for ever growing population. Vertical farming technologies offer solutions to increasing demand for clean, sustainable and locally produced food as well as making production possible in harsh conditions, where water or arable land is limited. Profitable and scalable vertical farming systems are available mainly for leafy greens like lettuce and herbs. Modular and vertical farming solutions for high-wire crops like cucumbers, tomatoes and beans are not on the market yet.



Natural Resources Institute Finland (Luke) is offering a novel and patented multilayer technology for high-wire crops where produce is growing horizontally.

Luke's solution offers:

- Automation potential for harvesting - cucumbers easily accessible for a robot
- More uniform distribution of light by horizontal positioning of plants
- Production efficiency by longer life cycle for cucumber plants in the production. Decrease from 3-4 plantings per year to 2 creates cost savings for farmer
- Three times more cucumber per square meter with six production layers when compared to conventional growing

Solution is scalable, thanks to modular design and optimized light environment.

Patent *Apparatus for cultivation of long-stem vegetable plants, Related method and uses* granted in Finland 2021 (FI129234B), National applications filed in EU, USA, Canada, Australia, Japan and South Korea.

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