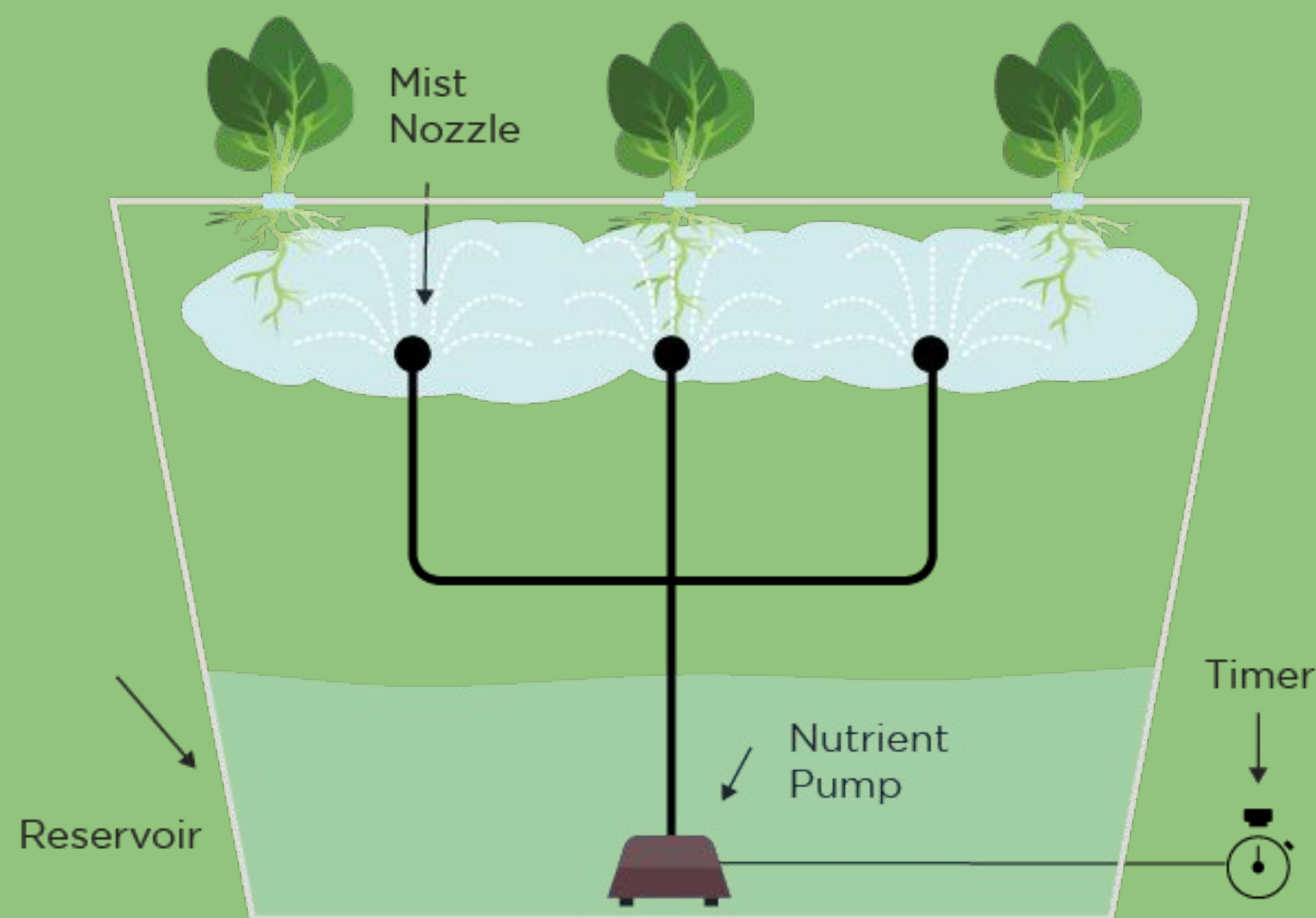


# Can Aeroponics Sustainably Feed the World?

By David Slater and Amelia Kovacs

What is aeroponics?: The process of growing plants in an air or mist environment rather than soil



## PROS:

1. Maximum nutrient absorption for plant roots due to no growing medium
2. Yield rates are approximately 30% more than traditional farming (Ohta, 2013)
3. Can continue to grow year round
4. Reduces soil degradation by minimizing need

## CONS:

1. Require constant attention to sensitive system
2. Energy intensive
3. The cost for initial set up can be high
4. Require technical knowledge
5. Susceptible to power outages
6. Potential root diseases

## Why aeroponics?

1. Soil degradation due to conventional practices
2. Potential economic savior for farmers
3. Reduces ecological effects of current conventional practices (land use, fertilizer use, deforestation)

# References

- AEROPONIC TECHNOLOGY*. (2019, February). Retrieved from True Garden:  
<https://truegarden.com/commercial/#aeroponics>
- Discover Aeroponics - Tower Garden Aeroponic System. (n.d.). Retrieved February 13, 2019,  
from <https://www.towergarden.com/aeroponics>
- Griffin, M. D. (2006). Spinoff. *National Aeronautics and Space Administration*, 64-67. Retrieved  
from National Aeronautics and Space Administration: [https://www.nasa.gov/pdf/164449main\\_spinoff\\_06.pdf](https://www.nasa.gov/pdf/164449main_spinoff_06.pdf)
- IBISWorld Industry Report OD4012: Hydroponic Crop Farming in the U.S. (2018). *IBISWorld*,  
6.
- Madigan, J. (2018). IBIS World Industry Report 1120: Vegetable Farming in the U.S. *IBISWorld*,  
5-12.
- M. (2017, December 25). A Deep Look At Aeroponics. Retrieved from <https://www.greennandvibrant.com/aeroponics>
- Ohta, Y. (2013). Assessment of Total Phenolic and Flavonoid Content, Antioxidant Properties,  
and Yield of Aeroponically and Conventionally Grown Leafy Vegetables and Fruit  
Crops: A Comparative Study. *Evidence-Based Complementary and Alternative  
Medicine*, 9. Retrieved from <https://www.hindawi.com/journals/ecam/2014/253875/>