## K-State Research and Extension - Shawnee County

# MAKING A DIFFERENCE

Global Food Systems Water Health Community Developing Tomorrow's Leaders

## **Grand Challenges**

K-State Research and Extension develops and delivers practical, research-based solutions to challenges faced by all Kansans, which includes the grand challenges:

- Global Food Systems
- Water
- Health
- Community Vitality
- Developing Tomorrow's Leaders

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Grand Challenge: Global Food Systems, Water, Community Vitality, Health Title: Hydroponics at Lotus House

### Why is this issue important?

As the population of the world continues to rise, more emphasis is going to be put on growing more crops on less land with less inputs, including water. Hydroponics is a way to do just that! According to data from the National Park Service, hydroponics can use up to 10 times less water than conventional production methods. The Lotus House is an organization in Topeka that provides those with a mental illness a place of belonging, where everyone works for the benefit of the organization.



How did Extension address this issue?

Beginning last fall, the Horticulture Agent began working

with members and staff of the Lotus House to bring their hydroponic TowerGardens out of storage and able to produce fresh vegetables and herbs for the other members of the organization. The Horticulture Agent was present to answer questions on seeding, system setup, nutrient management, transplanting, and harvest.

#### What was the impact?

Through the winter months, several varieties of leafy greens and herbs grew in the TowerGarden systems. In late-February, the Agent was present for harvest. The Lotus House members and staff harvested 4 lbs., 5 oz of leafy greens and 1 lb. of culinary herbs out of the systems. While this might not sound like a lot, there are some considerations that need to be made. Firstly, these crops were grown indoors during some of the coldest six weeks of the year (mid-January through late February). Secondly, all of these crops were grown in less than 30 square feet, and lastly, nearly 5.5 pounds of leafy greens and herbs is quite a bit! After harvesting, the vegetables were washed and separated into bags so that Lotus House members could take home a part of a healthy meal. The herbs were washed and dehydrated to be used in meals cooked and



served daily for members. Working with the members and teaching them how to operate and manage these systems gave them confidence to grow their own produce for the betterment of the entire organization. After we harvested, the members were excited to start seeds for the next round of leafy greens and herbs to be planted into the system!

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

May 2024