



RD2B Tower Garden Produce

A HEALTHY PARTNERSHIP



Human Sciences

MIDDLE TENNESSEE STATE UNIVERSITY

Nutrition and Food Science
Dietetic Concentration

Objective of RD2B Tower Gardening

Will provisions of grown tower garden produce/herbs, along with education and recipes, increase consumption of these foodstuffs in older adults?

Helping meet the nutritional needs

- ▶ Less than 10 percent of adults eat the recommended two to three cups of vegetables per day. By providing fresh greens and herbs year-round, these dietetic students are helping the seniors meet their nutritional goals.

Benefits of the produce

Nutritional information and recipes are provided to the older adults. The importance of the nutrients to improve the seniors' eyesight, cardiovascular, and bone health is emphasized.

Students also educate on ways the veggies and herbs can add flavor and variety to the seniors' diets.

Partners

- ▶ MTSU senior dietetic students- four student volunteers
- ▶ St. Clair Senior Center



MTSU dietetic students and St. Clair team up

Funding

- ▶ MTSU offers competitive public service grants each year.
- ▶ This project was chosen and a total of \$2600, covering 2 tower gardens was awarded.

Growing in the towers

- ▶ Two vertical aeroponic garden towers filled with a rockwool medium, a wool-like material made by melting basaltic rock and spinning it into fibers
- ▶ Rockwool – eco-friendly rock fiber
- ▶ Soilless seed starter cubes provide plant roots with oxygen and consistent moisture, encouraging rapid, healthy growth



Our greens!
Making life a little
greener and
healthier for older
adults.

Growing, watering, and feeding the plants

- ▶ After students fill the 13-gallon reservoir at the base of each tower with nutrient solution and water, a low-wattage, submersible pump pushes the mixture to the top of the garden through a pipe. The solution drips down through the interior of the tower and over the plant roots. A timer prompts regular repetition of this process.

Growing with water and light

- ▶ The garden is set to water the plants every 45 minutes for 14 hours a day and also provides light for 14 hours a day via the LED (light-emitting diode) attachments

What we are growing

- ▶ One tower contains various types of lettuce and other salad greens such as kale, swiss chard and radish greens. The other contains herbs including basil, parsley, oregano, sage, lemon balm, dandelion, and garlic chives.



Greens and more greens





Herbs too!

Advantages to using the tower gardening system

▶ Small space

▶ Quick growth

Distributing the produce

- ▶ Students give the produce to the St. Clair Senior Center in Murfreesboro along with nutrition and cooking information.



Harvested,
packaged,
and
ready for
distribution



Growing
day by
day!

Senior
dietetic
students
hard at
work





Aphid checks-
a challenge
for the tower
gardens



Aphid checks

Data collection

- ▶ Interviews will be conducted with the older adults receiving produce
- ▶ A qualitative manuscript will be written and disseminated following the distribution

Murfreesboro local TV station highlighted the project

- ▶ <https://www.youtube.com/watch?v=X5RzoVEFO68&feature=youtu.be>



▶ Thank you for your attention!

▶ Questions???????