University of Illinois Extension in Carroll, Lee and Whiteside Counties continued to provide the 4-H Youth Summer Garden program which started in Whiteside County in 2003. In 2015, the hiring of the 4-H Youth Development Educator and the Horticulture Educator provided an opportunity to transition to new leadership, which allowed for a focused expansion of this program with the continued assistance of University of Illinois Extension Master Gardeners and a 4-H Youth Extension Summer Staff member.

Our educators conducted needs assessments to determine the issues facing local communities, families and youth. 4-H can help youth understand where their food comes from, inspire them to pursue interests in agriculture, and create opportunities for them to lead change as they advocate for more food-secure communities. According to Feeding America's Mind the Meal Gap 2015 Study, 10.46% of our unit's families are food insecure (state average 11.7%) and 74.6% of families fall between 165%-185% of the poverty level. This level indicates eligibility for such food assistance programs as WIC, SNAP, Free and/or Reduced school lunch, and the like.

Carroll—10.9% food insecure & 72% between 165%-185% of poverty.
Lee—10.7% food insecure & 69% between 165%-185% of poverty
Whiteside—9.8% food insecure & 83% between 165%-185% of poverty

In addition to poverty and food insecurity concerns, Carroll County has a lack of summer daycare facilities. By collaborating with the only daycare facility in Carroll County, our staff were able to introduce gardening education to a countywide youth audience. Four of the other youth summer gardens located in Lee and Whiteside Counties were located at summer youth programs or daycares. The last was an Extension 4-H Special Interest (SPIN) Club that collaborated with a local church.

University of Illinois Extension 4-H Youth Summer Gardens were held at six locations across Carroll, Lee and Whiteside Counties in 2018. Two of the six gardens were grant funded. This past year, a record high 202 youth (182 participants' ages 6-12 and 20 participants' ages 4-5) from local summer programs participated. Sixty-one out of the 202 participants identified as African American or Hispanic. One location (78 out of 202 participants) reached a high percentage of low-income students. As part of the garden program at this site, SNAP-Ed collaborated since the free/reduced lunch rate of participants was 51% or higher. Two garden locations were each the focus of a

4-H SPIN Club. Twelve of the nineteen (63%) total SPIN participants were first generation 4-H members.
Our goals for the youth summer gardens program are to:

1) Educate about the importance of growing food for themselves and to share with those in need;
2) Demonstrate the principles of a well-tended garden through hands-on lessons and activities;
3) Experience new edible plants using their five senses, including sampling at least one new vegetable;
4) Comprehend the basic sciences of gardening including horticulture, botany, and soil science; and
5) Apply the steps of the 4-H experiential learning cycle.

Each week a new specific garden topic was introduced. Five of six gardens focused on a seven-week curriculum designed to meet the needs of the program location. The sixth location, which was a 4-H Food Access grant garden program, was twelve weeks of direct education. All garden sites continued to harvest produce through the end of the growing season to donate to local organization serving food insecure populations.

All garden sessions included hands-on activities focused on environmental science and horticultural science topics. This weekly program included half of the time-spent working hands-on in the garden with youth. The remaining time was spent with 4-H staff, who were providing reinforcement educational activities around the weekly theme. The curriculum themes included information about soil, seeds, pollination, growing produce, insects and bugs, caring for living things, and caring for the environment. Utilizing a multitude of resources and activities including produce tastings, soils sleuthing and micro-robot soil activities, building a 3D flower, edible plant parts identification, prairie plant root relay race, children's books, as well as others.

As the weeks progressed, participants made observations and discussed what had occurred in the garden since the previous week. Observations were made both quantitatively and qualitatively regarding the growth of plant structures including stem growth and flower development, insect visitation, and disease presence. Upon discovery of produce in the garden, youth would harvest, and after cleaning by the garden instructor, youth were encouraged to taste the vegetable or herb fresh from the garden. During tastings, youth were verbally asked what they enjoyed and if they tried something new during the garden

season. A majority of participants tried a new vegetable or new vegetable cultivar. At the end of each season, daycare coordinators commented that life skills (teamwork, cooperation, and communication) were reinforced throughout the garden program to the youth participants. For evaluation, all participants completed the 4-H Science Common Measures Survey. Majorities of the participants are interested in plant and environmental sciences, as well as, like science. As part of a 4-H program, more than 75% learned new things about science. At the 4-H Food Access Grant location, Fifty-four percent (7 out of 13) of them started gardens at home too, which we consider a big unintended impact and all thirteen students signed up to enter at least one vegetable plate in the Lee County 4-H Fair using produce from the program. At this garden location specifically, 4-H youth were able to donate 328.50 pounds of fresh produce to a food pantry and a community food drop-off location, as well as offering it to the senior citizens community next door to the church. The students also took home produce that they enjoyed and would eat. The produce used for the fair or taken home were not included in the donation total.

Through a wider exposure and growing the food themselves, a majority of youth summer garden participants tried a new vegetable or cultivar. By participating in these summer gardens, youth reinforced their life skills while addressing food insecurity in their communities by growing and donating the produce to those in need.