



Agriculture,
Natural Resources
and Extension

2021 Annual Highlights

Extending Knowledge, Changing Lives

The UAF Cooperative Extension Service and the Agricultural and Forestry Experiment Station strive to help Alaskans live better lives through outreach and vital research on natural resource issues.

Powering through the pandemic

With a few key volunteers, the Tanana District pulled together a COVID-safe 4-H exhibition. With safety protocols approved and in place, we held a livestock show on two days for large and small livestock, a very small horse show, and had projects entered and judged for the family and consumer sciences, art and crafts, etc. We also had a very successful online market livestock auction.

— Marla Lowder, Tanana District 4-H

Agriculture and Horticulture

In 2001, the first peonies at Georgeson Botanical Garden were planted as a research experiment. The experiment bloomed. Today, there are more than 135 commercial peony growers statewide and peonies are Alaska's only major agricultural export. Vegetable variety trials expanded to the Matanuska Experiment Farm in Palmer. Studies continued on the use of persistent herbicides to control invasive species such as European bird cherry.



Youth

Most programming remained remote. The Bristol Bay 4-H Federally Recognized Tribes Extension Program completed its ninth year. Take-home activity kits were a big success in 4-H programs around the state; 700 were distributed in Tanana District. In Bethel, the 4-H club served more than 10,000 meals to people who lost their jobs or were otherwise affected by the pandemic.



Health, Home and Family

An advantage of hosting events via Zoom is that it gives faculty a greater statewide reach for classes on health, food preparation and preservation. For areas of the state with limited bandwidth, some Zoom classes are recorded and emailed to registered attendees. A radon presentation drew more than 200 people from Alaska, as well as nationwide. StrongWomen/Strong Seniors classes continued via Zoom, outdoors or indoors with masks and social distancing. Online classes sometimes attracted 20 to 50 individuals, some from outside Alaska.





Mining and Petroleum Training Service

MAPTS was awarded the U.S. State Department's "Advancing Greenland's Mineral Sector Education" grant as subrecipient to the University of Utah. This three-year project includes hosting Greenland staff and students at the MAPTS camp, creating curriculum in partnership with Greenland, and training a local workforce to create a facility that models MAPTS Mine Training Center. This project emphasizes MAPTS' unique ability to train local workforces and to safely operate in arctic conditions.



Alaska Tilth

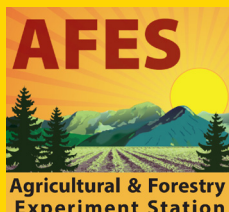
Nine farms and the Matanuska Experiment Farm's vegetable variety trials program contributed to the Tilth Program. Thirty-nine vegetable varieties were donated, totaling 10,632 pounds of produce, a 5,067-pound increase. Alaska Tilth handed out over 1,900 recipe bags, and the produce was used in 100,000 Kids Kupboard meals. The Tilth program not only helps supply food for people in need, but it also helps support local farmers, making our food system more reliable.

Cooperative Extension provides trusted, research-based information to Alaskans. It is part of a national education network supported by a partnership between the U.S. Department of Agriculture and land-grant universities.

The **Mining and Petroleum Training Service** delivers training, development and consulting services to resource industries.

Researchers with the **Agricultural and Forestry Experiment Station** create knowledge and solve problems in agriculture, forest sciences and outdoor recreation.

The impacts here provide a glimpse at our accomplishments for 2021.



Quick Facts



Continuing research in spring wheat varieties, cover crops, barley and malting barley. The outcome of this research will provide a spring wheat cultivar that can be grown in Alaska with good quality and thus contribute to Alaska food security. A two-row barley could be used as a malting barley for Alaska brewers.



Sitka 4-H'ers worked with the Sitka Conservation Society to collect invasive European black slugs, which are known garden and agricultural pests. A friendly competition resulted in 600 invasive slugs collected, disposed of or shared with scientists.



OneTree Alaska provided birch sap collecting kits to more than 220 families. Kits included a sap bucket and lid, a drill bit, a spile or tap, directions and recipes. Families learned how to collect and measure sap, and turn it into syrup.

Extension's 2021 Online Presence



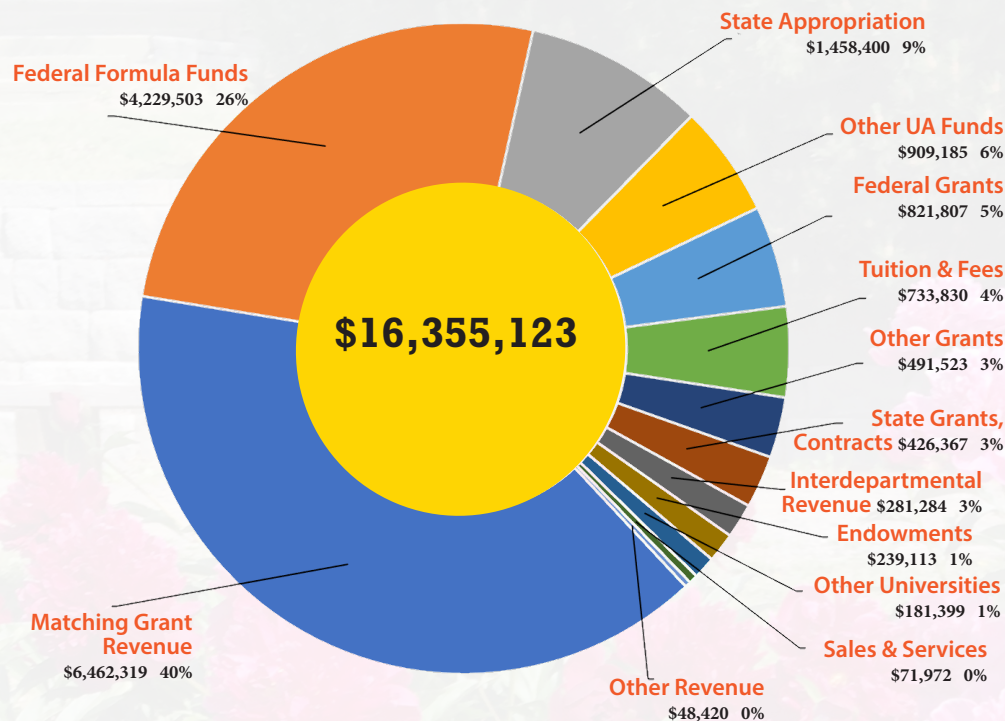
Agricultural and Forestry Experiment Station highlights ...

- Alaska Invasive Species Partnership consolidated reporting platforms for invasive species to reduce public confusion. [Alaskainvasives.org](https://alaskainvasives.org) is a one-stop site for people who want to report an invasive species.
- Development and launch of a self-paced online course on Remote Sensing of Wildfires on the edX online learning platform, which attracted 1,627 enrollments from 107 countries.
- The weekly Walkabout Wednesdays at MEFEC continued remotely via Facebook Live, as well as other programs such as planting and harvesting potatoes.
- Projects that employ LIDAR and photogrammetry using unmanned aerial vehicles are collecting data on Alaska's boreal forests, such as growth rates, insect infestations and the effects of wildfires.
- A mass spectrometer was purchased through a USDA grant to continue research into stable isotopes in the boreal forest.
- Studies of Alaska greenhouse and controlled environment production using LEDs and other emerging technologies continued. Studies determining the most effective LED wavelength compositions, configurations, durations and intensities are still needed in order to reach the production potential for various crops.
- A system using GPS satellite telemetry is being developed to set up a virtual home range for reindeer herds in remote regions. Satellite telemetry allows reindeer producers to monitor the herds remotely and includes a system to alert herders if reindeer approach the boundaries.

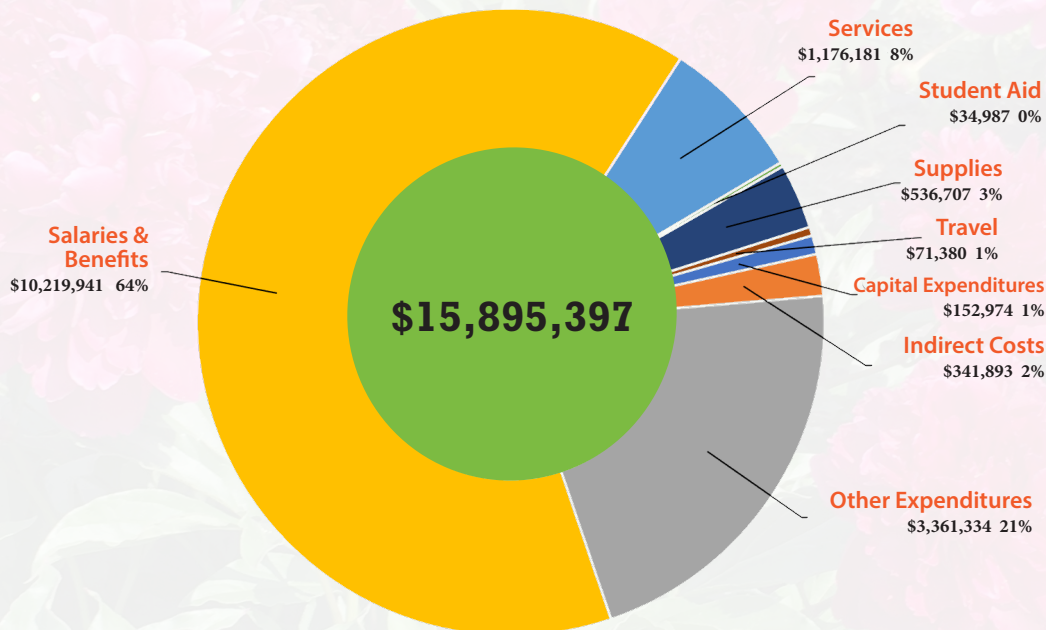


July 1, 2020 to June 30, 2021 (FY21)

Revenues



Expenditures



These pie charts represent the total revenues and expenditures for the Institute of Agriculture, Natural Resources and Extension.



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