

Agriculture and Extension

- Minnesota Agricultural Experiment Station
- Extension
- College of Food, Agricultural and Natural Resource Sciences
- College of Veterinary Medicine

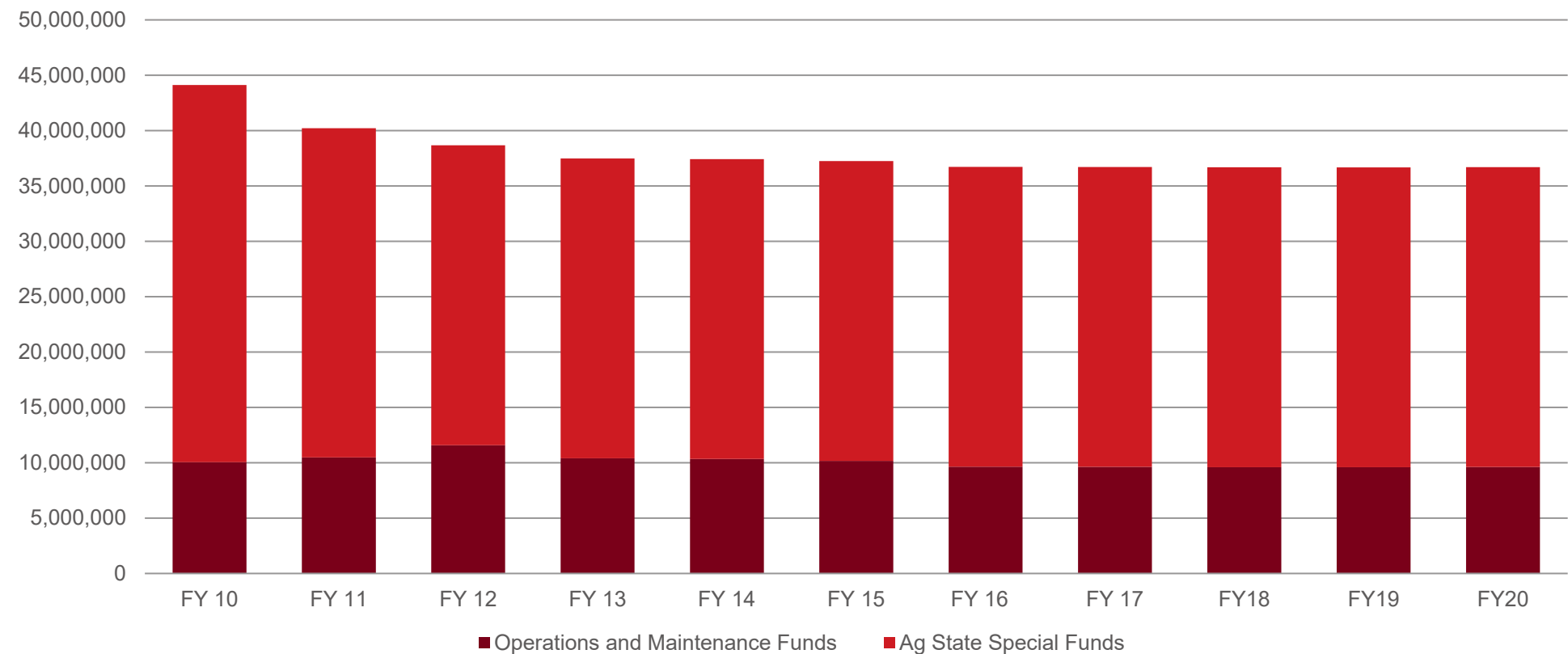


UNIVERSITY OF MINNESOTA
Driven to DiscoverSM

This report was assembled at a cost of less than \$500 that included the time of UMN employees only.

MN Agriculture Experiment Station

MN Agricultural Experiment Station
Ag State Special and Operations & Maintenance Appropriation
Fiscal Years 2010 - 2020





Building a stronger Minnesota together

Extension plays a key role in the University of Minnesota's mission: We bring Minnesotans together to build a better future through University science-based knowledge, expertise and training.

Connecting every county with the University of Minnesota

87

Extension is in every county and tribal community. Regional offices are strategically located across the state.

65

percent of Extension faculty and staff work in Greater Minnesota

35K+

trained volunteers multiply our reach



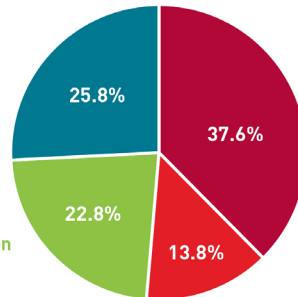
2021 budget

Grants, gifts and other: \$19.9 million (25.8%)

Individuals and organizations provide support for valuable Extension opportunities important to them.

Counties: \$17.6 million (22.8%)

Investments ensure 4-H and other Extension programs are delivered locally.



State: \$29 million (37.6%)

Investments are leveraged through collaborations with Minnesota state agencies, including departments of agriculture, health, human services, natural resources and tourism.

Federal: \$10.6 million (13.8%)

The U.S. Department of Agriculture supports wide-ranging research and Extension education.

MAKING A DIFFERENCE IN MINNESOTA: ENVIRONMENT + FOOD + AGRICULTURE + COMMUNITIES + FAMILIES + YOUTH

During the COVID-19 pandemic, Extension is at work across rural, suburban, urban and tribal communities.

More than 1,000,000 people are reached annually by Extension education.



Shaping a lifetime of leadership in young people through Minnesota 4-H.

Minnesota 4-H hosted 89 local showcases over July and August that engaged more than 6,000 youth, 2,500 volunteers and 1,200 judges.



Strengthening Minnesota's food and agriculture

Extension research and education improves crop yields, animal health, farm productivity and water conservation across Minnesota's 68,500 farms.



Encouraging responsible lawn and garden practices through a 2,400-strong Master Gardener volunteer force

Applications for the Master Gardener volunteer program rose by 160% in 2020



Creating healthier families for 150,520 people through SNAP-Ed.

3,572 Minnesotans learned how to create a two-week grocery and meal plan to prepare for possible quarantine for exposure to COVID-19. The plan was made flexible for food shelf clients.



Protecting natural resources, including soil, water and woodlands

Last year, more than 2,000 Minnesota Master Naturalists and community science volunteers found and reported invasive species, restored public lands, and collected scientific data for researchers.



Understanding what makes communities welcoming, economically vibrant and well-led

100+ economic analyses inform local community decisions each year and 25 communities run Extension learning groups.



UNIVERSITY OF MINNESOTA EXTENSION

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UNIVERSITY OF MINNESOTA



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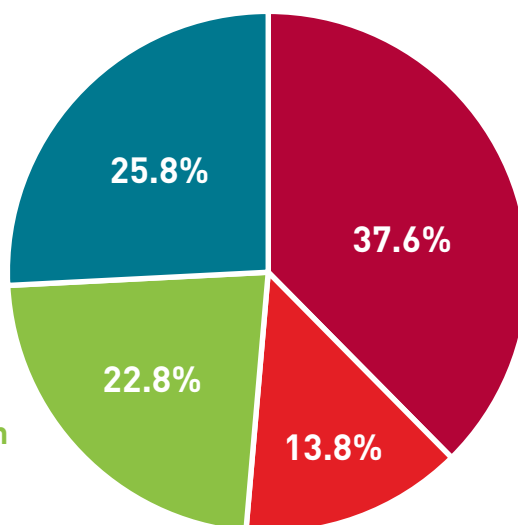
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During the COVID-19 pandemic, Extension has made a difference in rural, suburban, urban and tribal communities.

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Preparing young people to lead through Minnesota 4-H

4-H kept young people engaged during COVID-19 through **400+** virtual programs, **11,000** educational kits and **89** local showcase events.



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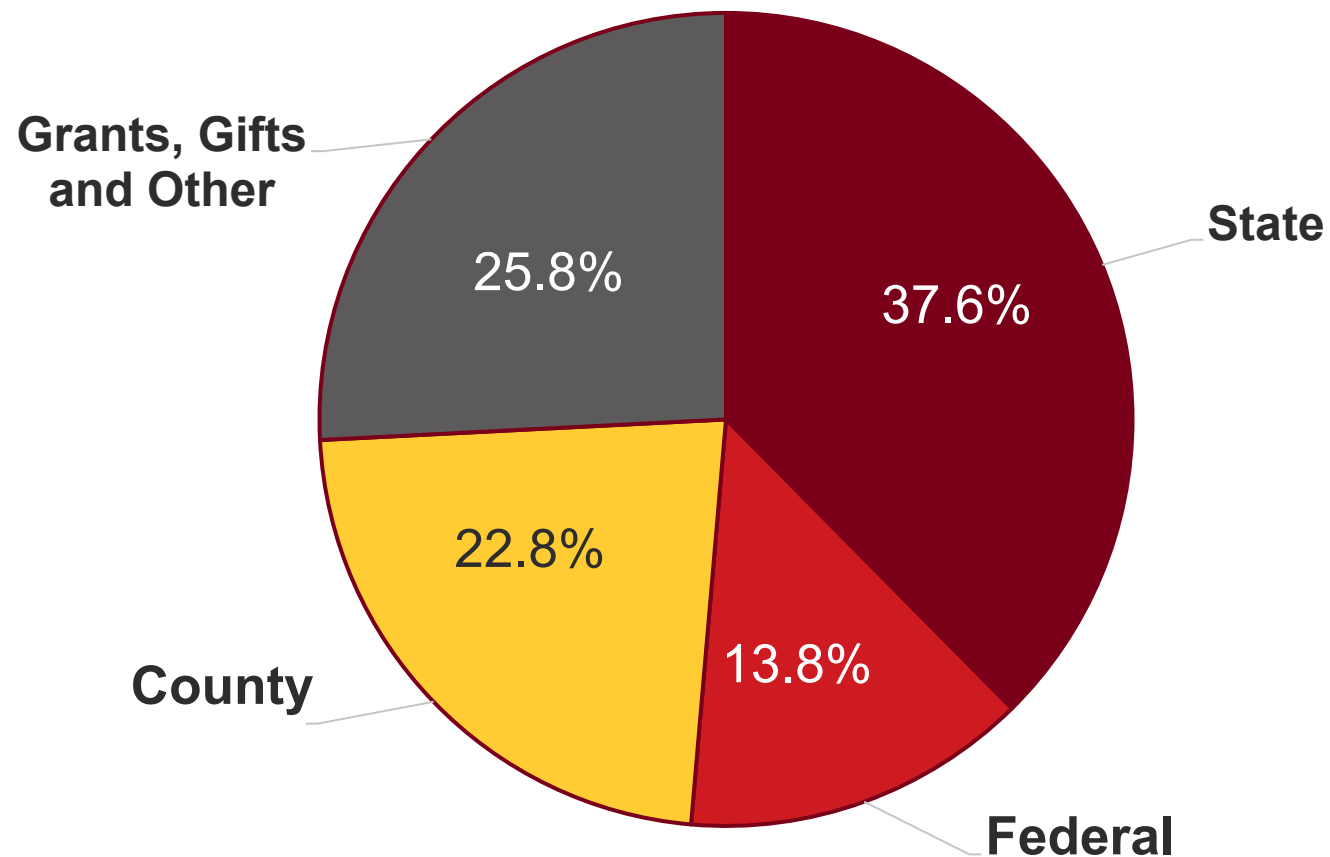
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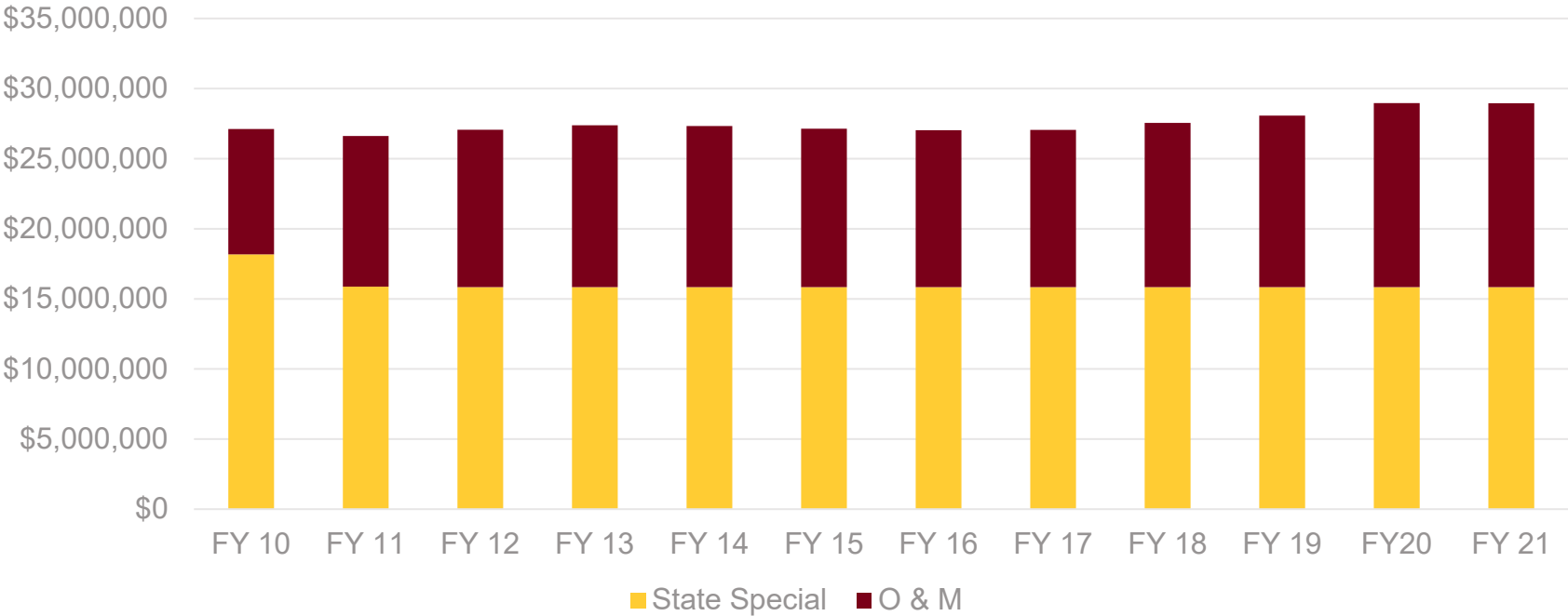
UNIVERSITY OF MINNESOTA EXTENSION

Extension 2020-21 budget: \$77M

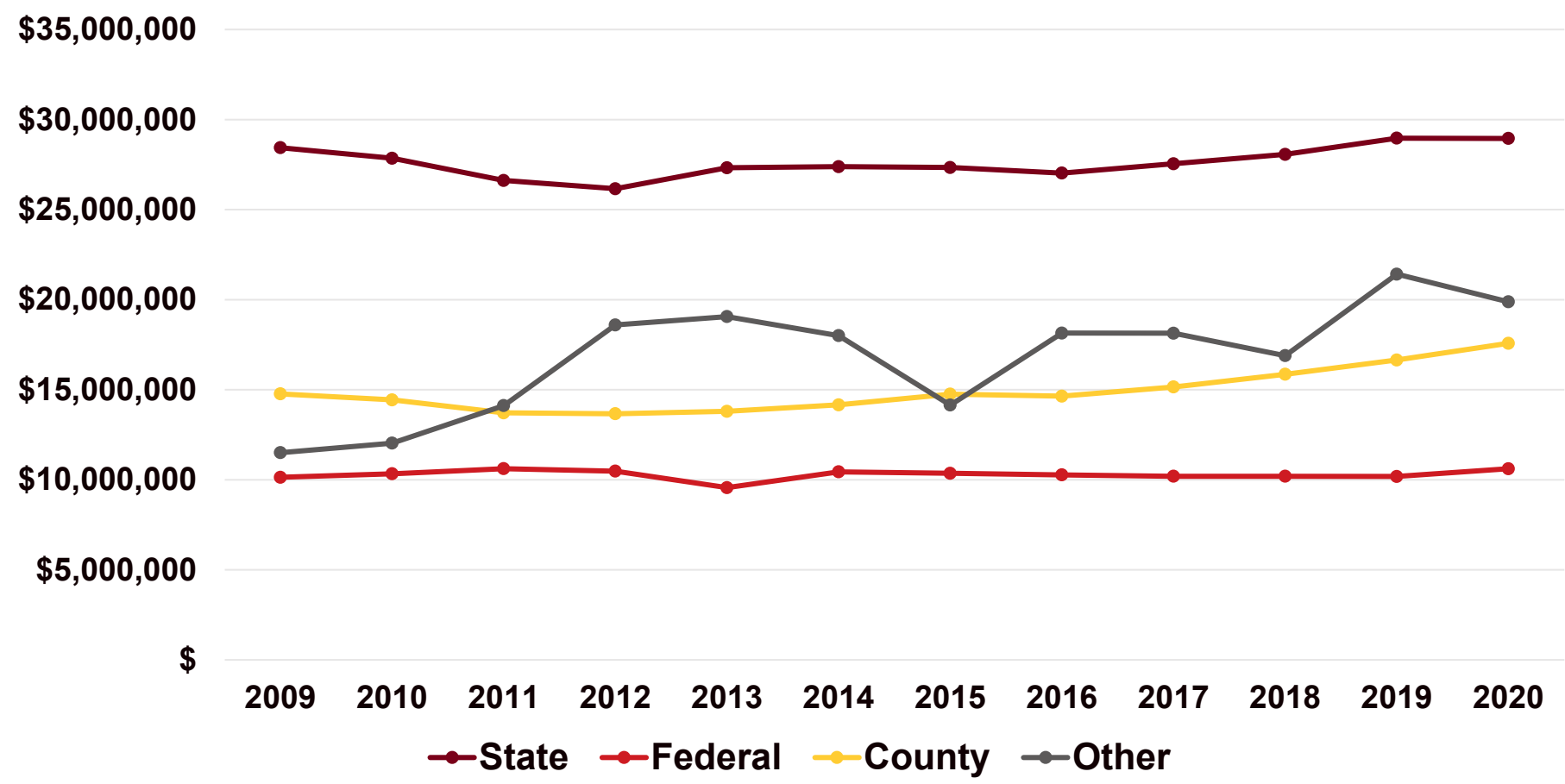


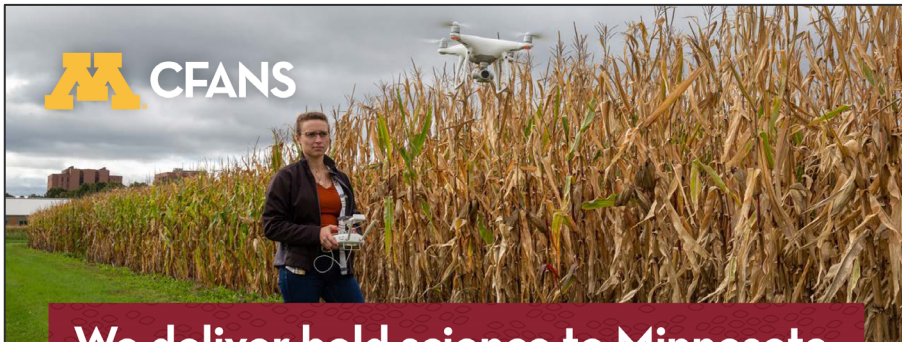
MN Extension

State Specials and O&M FY10-FY21



Extension funding trends



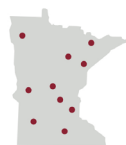


We deliver bold science to Minnesota.

With a legacy of bringing discoveries to life through science, **CFANS educates the next generation of leaders to anticipate and adapt to a changing state and world**, and solves the real challenges of nourishing people while enriching the environments in which we live. We are able to do this through the support of alliances with agricultural and natural resource partners.

Grand Challenge research and education investments

- Food security, agricultural productivity
- Invasive species and biodiversity/pest and disease dynamics
- Renewable energy and climate adaption
- Water resources and uses
- Forestry
- Precision agriculture
- Educating future leaders in applied science and technology for agriculture, food and natural resource sciences



10 research and outreach centers across Minnesota

7 continents



on which CFANS scientists connect Minnesota with research and business opportunities

27 programs

14 undergraduate and 13 graduate programs in disciplines involving food, agricultural, and natural resource sciences

658 degrees



awarded to undergraduates and graduates by CFANS in 2019–20 to help fill critical needs in Minnesota's agriculture, food, and natural resource workforce

People

Fall 2020

1,926	Undergraduates
556	Graduate Students
230	Faculty
834	Staff
29,644	Alumni

\$5 million state investment in agricultural productivity to hire new scientists and technicians to work in seven key areas through the Agricultural Research, Education, Extension and Technology Transfer (AGREETT) program.



1. Crop and livestock productivity



2. Microbial science



3. Water quality and climate resilience



4. Agricultural technology and decision-making



5. Nutrient recycling and management



6. Agro-ecological innovation

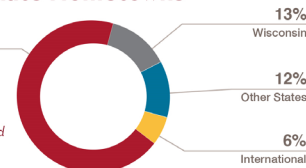


7. Technologies for managing pest resistance and climate adaption

Undergraduate Hometowns

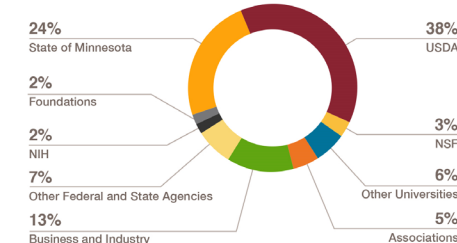
69% State of Minnesota

70 Minnesota counties represented in the 2020-21 undergraduate population



Sponsored grant awards received

Total 2020-21: \$72,432,390



Sponsored grant awards leverage state funding **\$72,432,390** adds to **\$21,993,054** State Special Funding

93%

of CFANS students complete an internship in their major

\$1.9 million

in CFANS scholarships are awarded to undergraduate students each year

93%

of CFANS graduates are employed or continuing their education within 6 months of graduation

Federal funding



is used to support science-based responses to emerging issues

- Global food security and hunger
- Sustainable energy
- Forestry and natural resources
- Food safety and nutrition
- Strong rural communities

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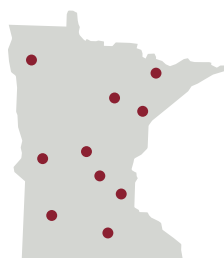


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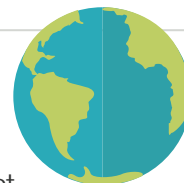
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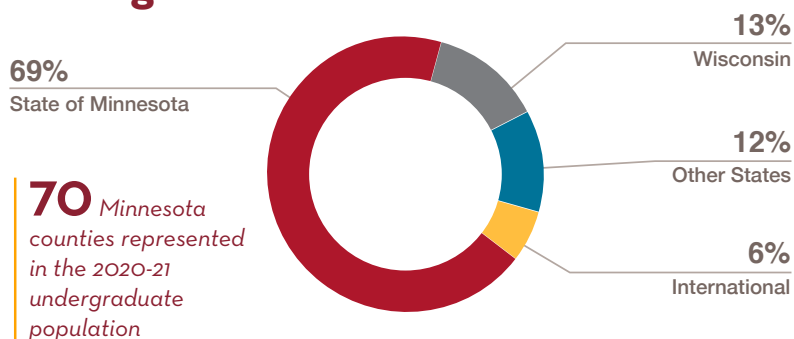
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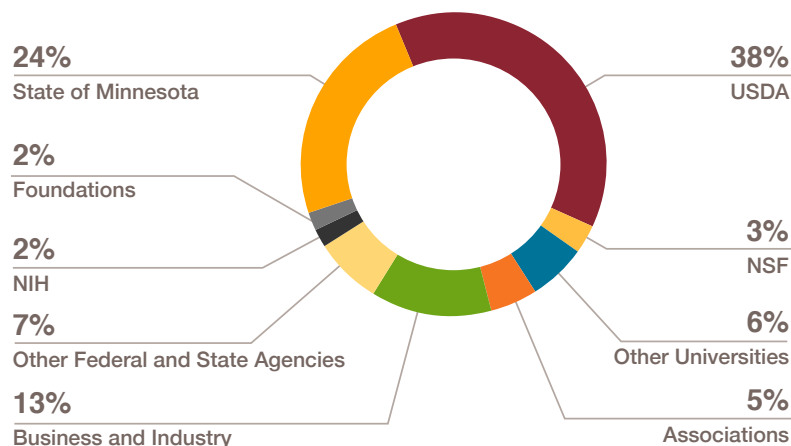
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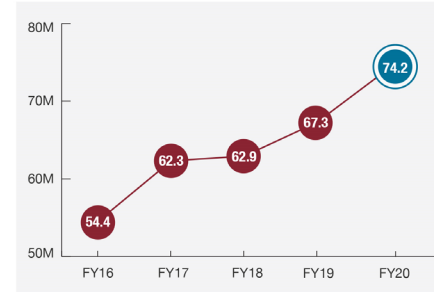


CFANS RESEARCH

FY20 YEAR IN REVIEW

TOTAL SPONSORED PROJECT AWARDS

CFANS received **\$74,155,703** in sponsored project awards in FY20.



The College of Food, Agricultural and Natural Resource Sciences (CFANS) is a **national leader in innovative scientific discovery**. The work of its talented researchers cultivates breakthrough solutions to today's greatest challenges, all with an exemplary commitment to diverse views and research ethics.

AWARDS AND SUBMISSIONS

195 distinct funders provided funding for CFANS researchers in FY20

413

Sponsored project awards received by CFANS in FY20

681 Sponsored project proposals submitted by CFANS in FY20

INTELLECTUAL PROPERTY

CFANS propels UMN discoveries. The University is in the **top 10 for technology transfer** and **2nd in the Big Ten for "innovation impact."**



5

new startups launched in FY20

11 [®]

trademarks and patents issued in FY20

31

new inventions in FY20

9

new startups launched in past five years



80

trademarks and patents issued in past five years

233

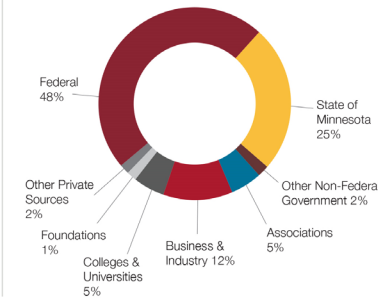
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CFANS' vision is to advance Minnesota as a global leader in food, agriculture, and natural resources through **extraordinary education, science-based solutions, and dynamic public engagement** that nourishes people and enhances the environment in which we live.

FUNDING SOURCES

Funding for CFANS' cutting-edge research comes from **partners of all sizes and specialties.**



cfans.umn.edu/research

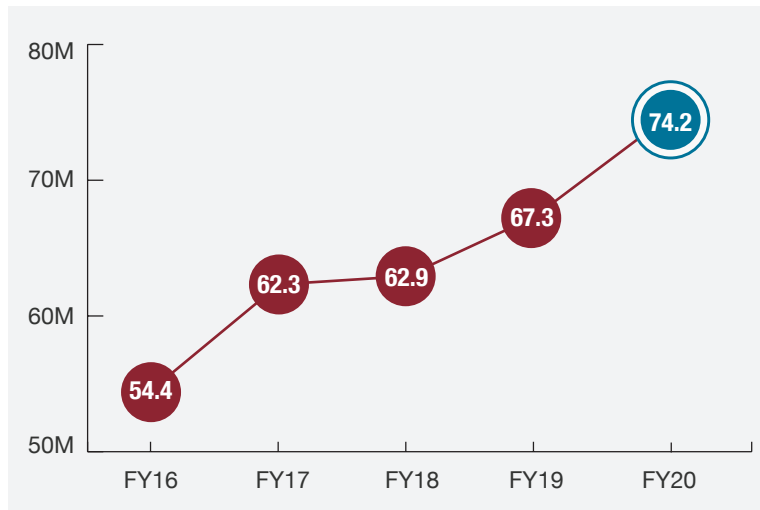


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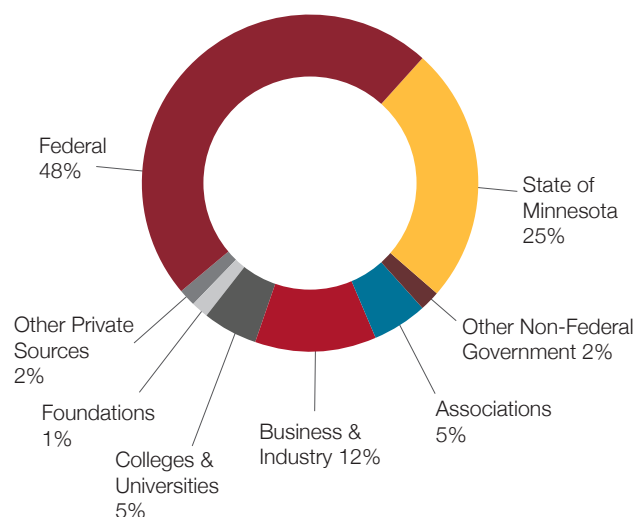
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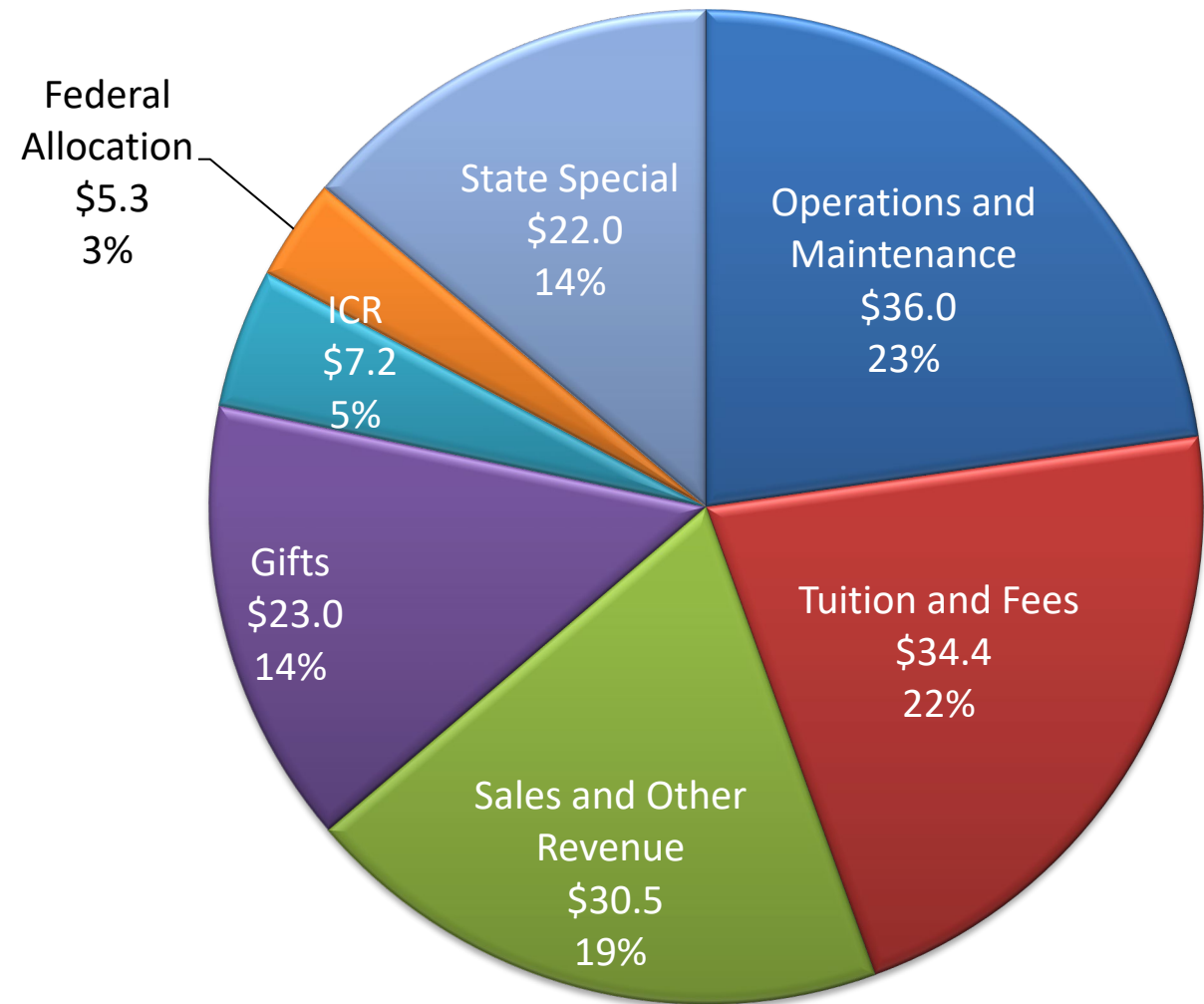
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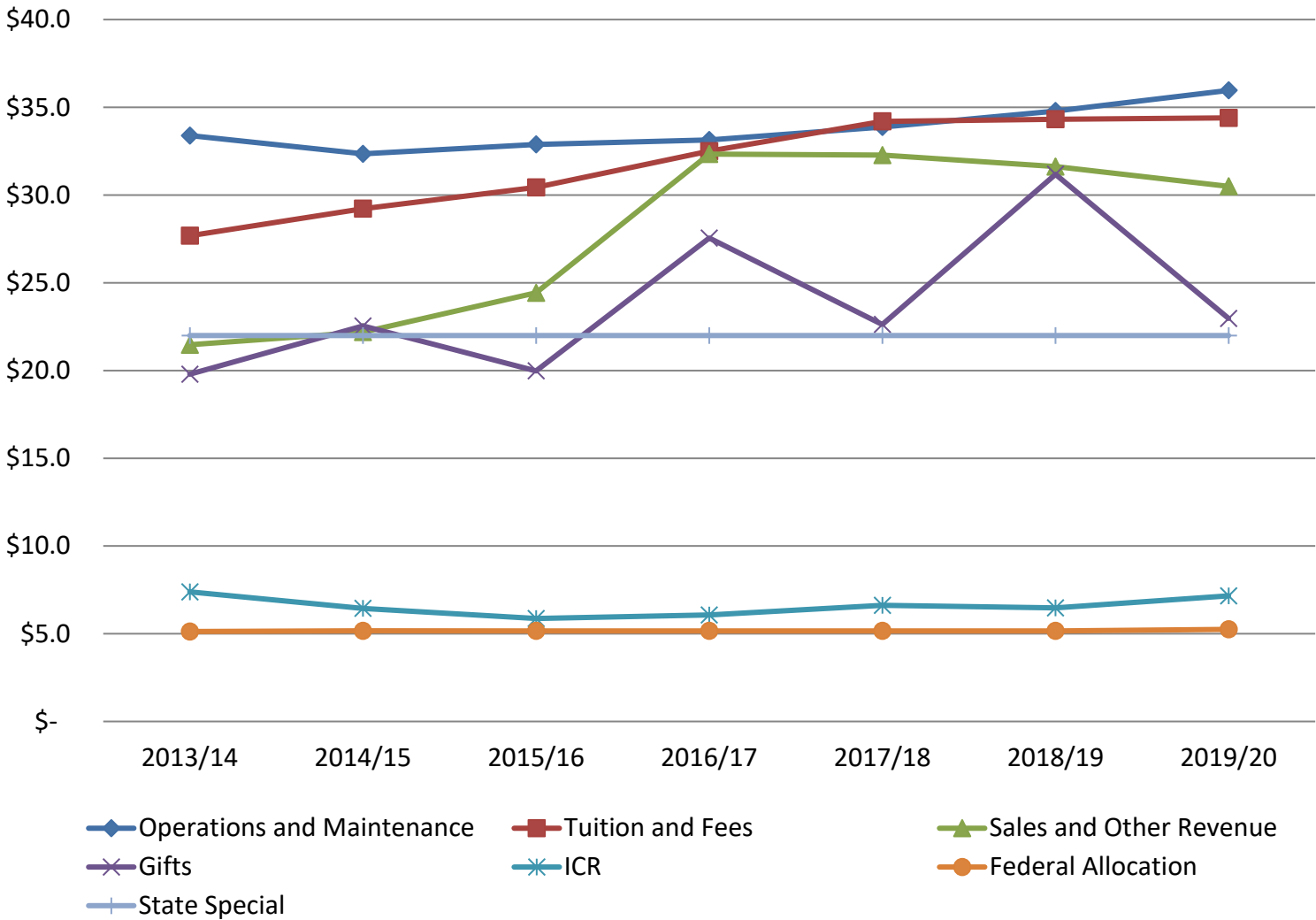
College of Food, Agricultural, and Natural Resource Sciences 2019-2020 Resources: \$158.2 Million





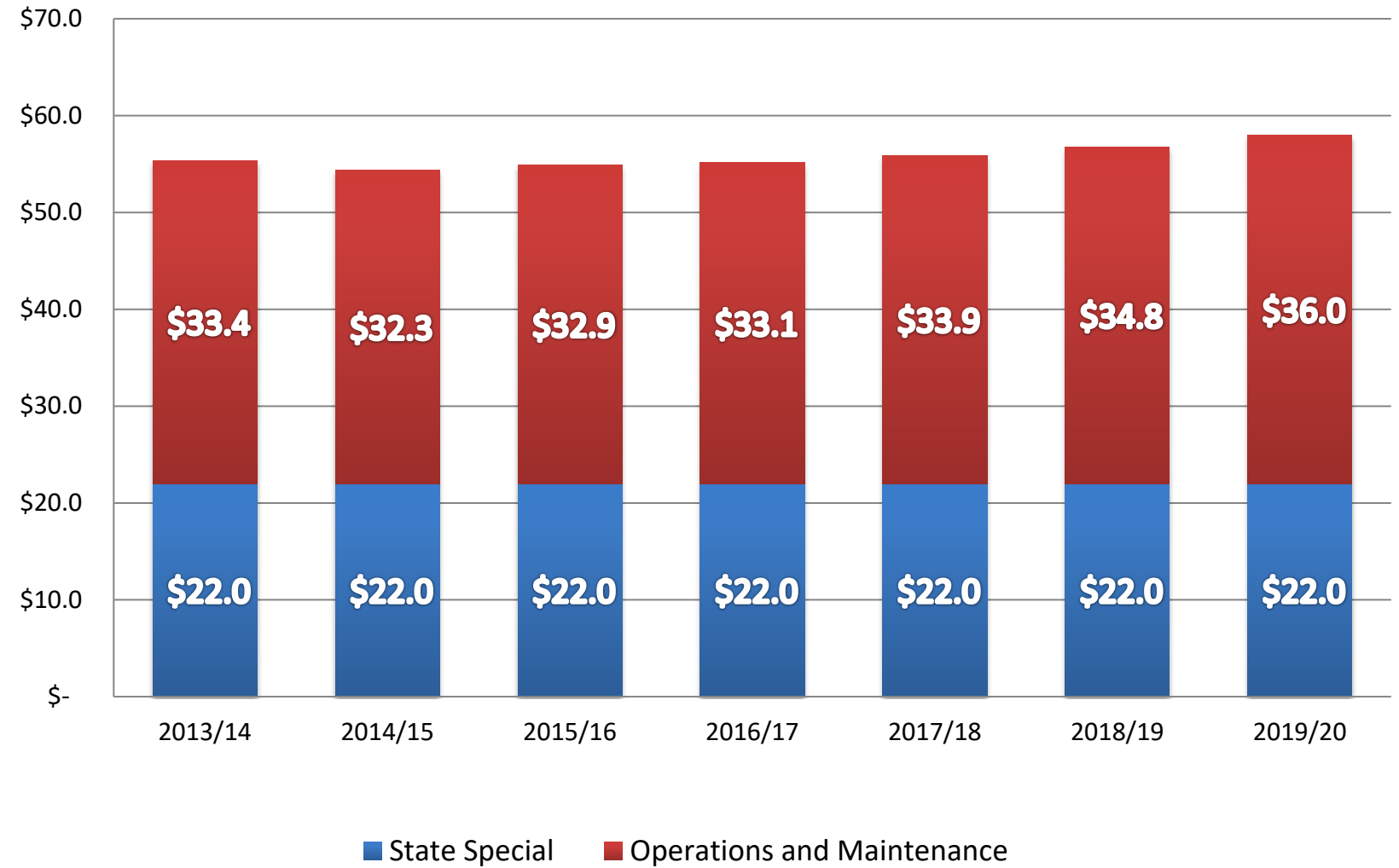
College of Food, Agricultural and Natural Resource Sciences
UNIVERSITY OF MINNESOTA

College of Food, Agricultural, and Natural Resource Sciences Major Fund Area Trends (Millions)





College of Food, Agricultural, and Natural Resource Sciences State Funding Trends (Millions)



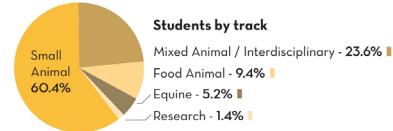


DVM students

923 applicants for 105 seats in the Class of 2025

The Class of 2021 has 105 students - 55 residents / 50 non-residents

28 Veterinary Food Animal Scholars Track students



Advancements



Meeting the demand for veterinary care

A partnership with South Dakota State University will produce more veterinarians in rural areas in Minnesota and the Upper Midwest. Meanwhile, a community medicine initiative is teaching students to work in underserved communities.



Improving COVID-19 surveillance

An on-campus study is investigating COVID-19 infection rates and the performance and efficiency of pooled testing instead of individual testing. Pooled sampling allows targeted testing on those most likely to be infected, supporting our ability to serve animal health during record caseloads.



Measuring antimicrobial use in livestock

With US FDA funding, faculty developed pilot systems for collecting and analyzing antimicrobial use data from beef, dairy, swine, turkey, and chicken production settings. The goal is to preserve the ability to use effective antimicrobials to treat human and animal disease.



Enhanced disease surveillance

The Minnesota Veterinary Diagnostic Laboratory is increasing its surge capacity to deliver faster service to farmers when an infectious disease threatens their business. Recent outbreaks have demonstrated the value of fast, accurate results that drive decision making.

The University of Minnesota, founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to benefit the people of the state, the nation and the world. The University's threefold mission of research and discovery, teaching and learning, and outreach and public service is carried out on multiple campuses and throughout the state.

Service

Veterinary Diagnostic Laboratory



- Official laboratory of the Minnesota Board of Animal Health
- 1 million procedures completed annually
- Federally accredited and networked

Veterinary Medical Center



- Over 32,000 patient visits - one of the busiest veterinary teaching hospitals in the world
- 57 veterinarians and nearly 140 technicians in 15 service areas

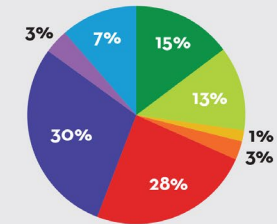
The Raptor Center



- More than 900 raptors treated in 2020
- Educating thousands of people through virtual programming
- Training veterinarians and students from around the world in raptor medicine and rehabilitation

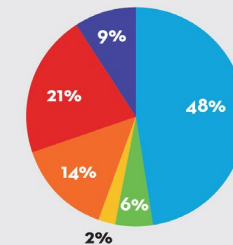
Funding (FY 2020)

Revenue - \$130.5 million



- Tuition - \$19.3
- State - \$16.9
- AES/MES - \$1.8
- Diagnostic Lab/State Special - \$3.5
- Sponsored Research - \$36.1
- Clinical & Diagnostic Income - \$38.7
- Indirect Cost Recovery - \$4.2
- Other - \$9.9

Expenses - \$126.1 million



- Salary and Fringe - \$60.1
- Lab/Medical Supplies - \$7.1
- Construction/Equip - \$2.9
- UM Infrastructure - \$18.1
- Sponsored Research - \$26.6
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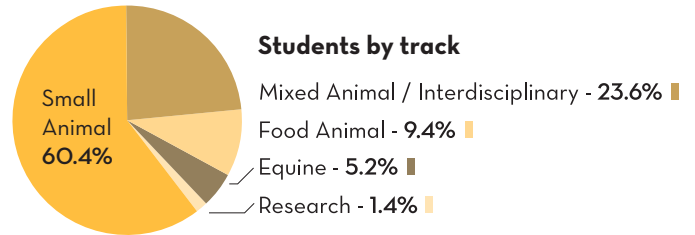


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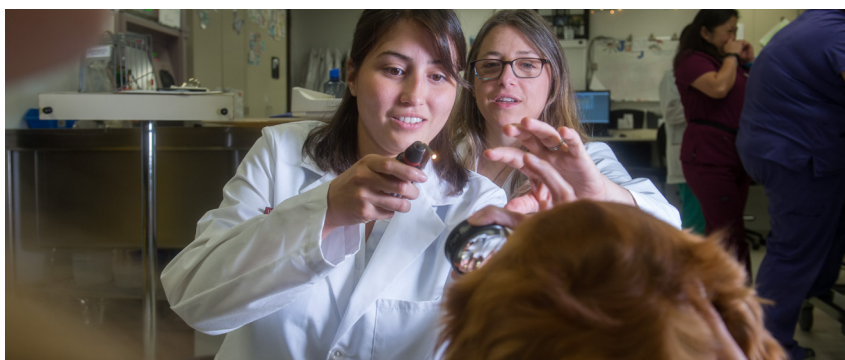
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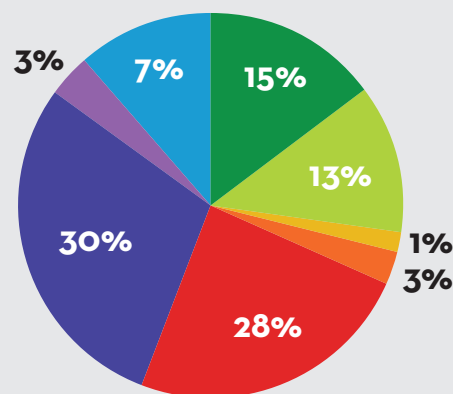
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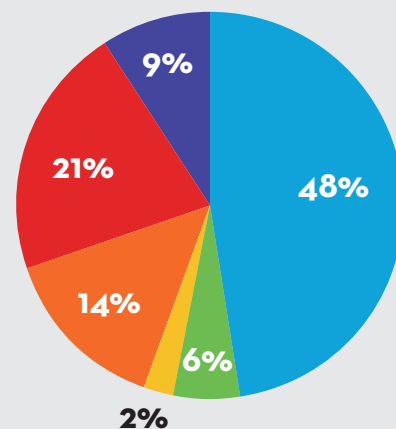
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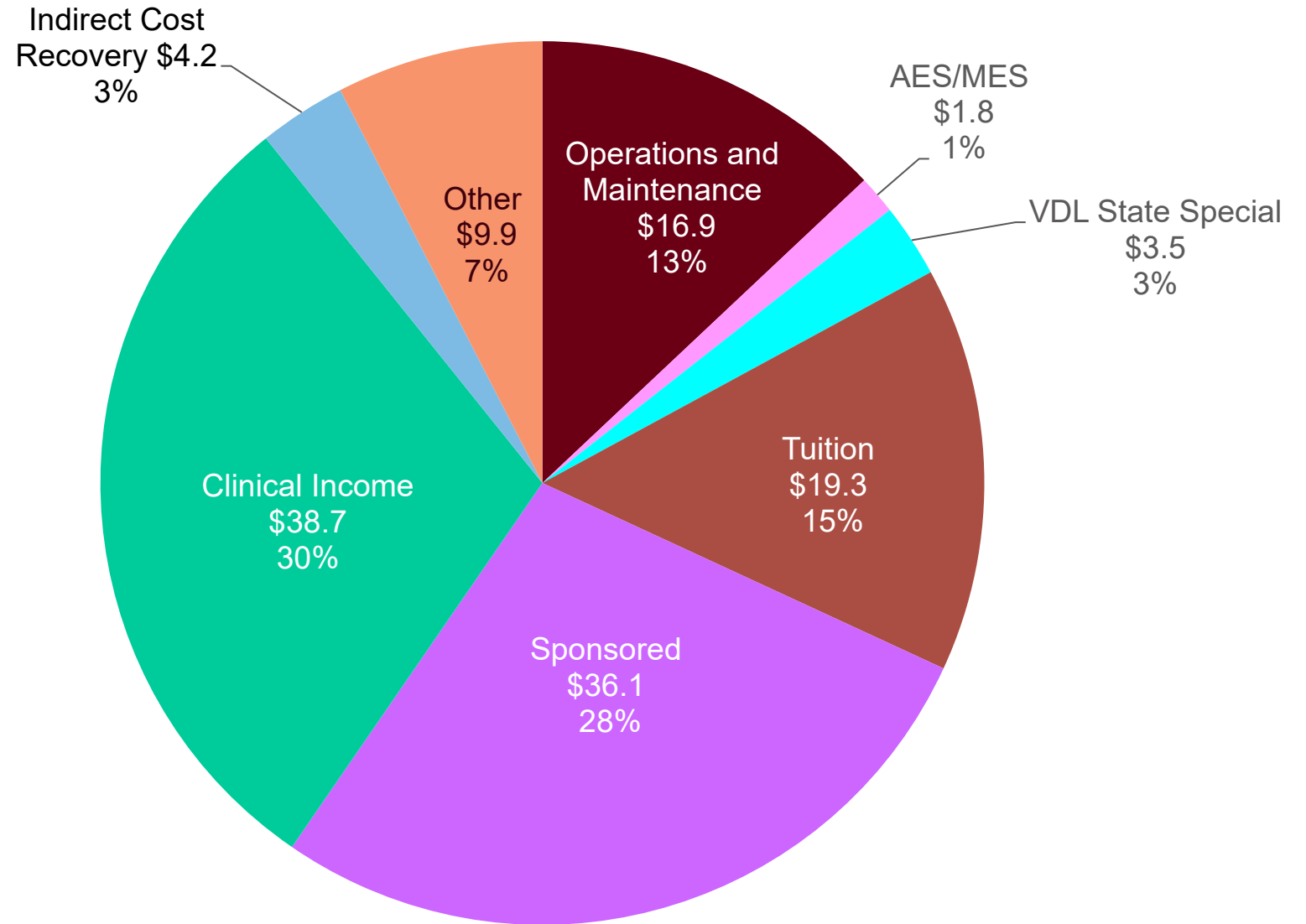
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COLLEGE OF
VETERINARY MEDICINE

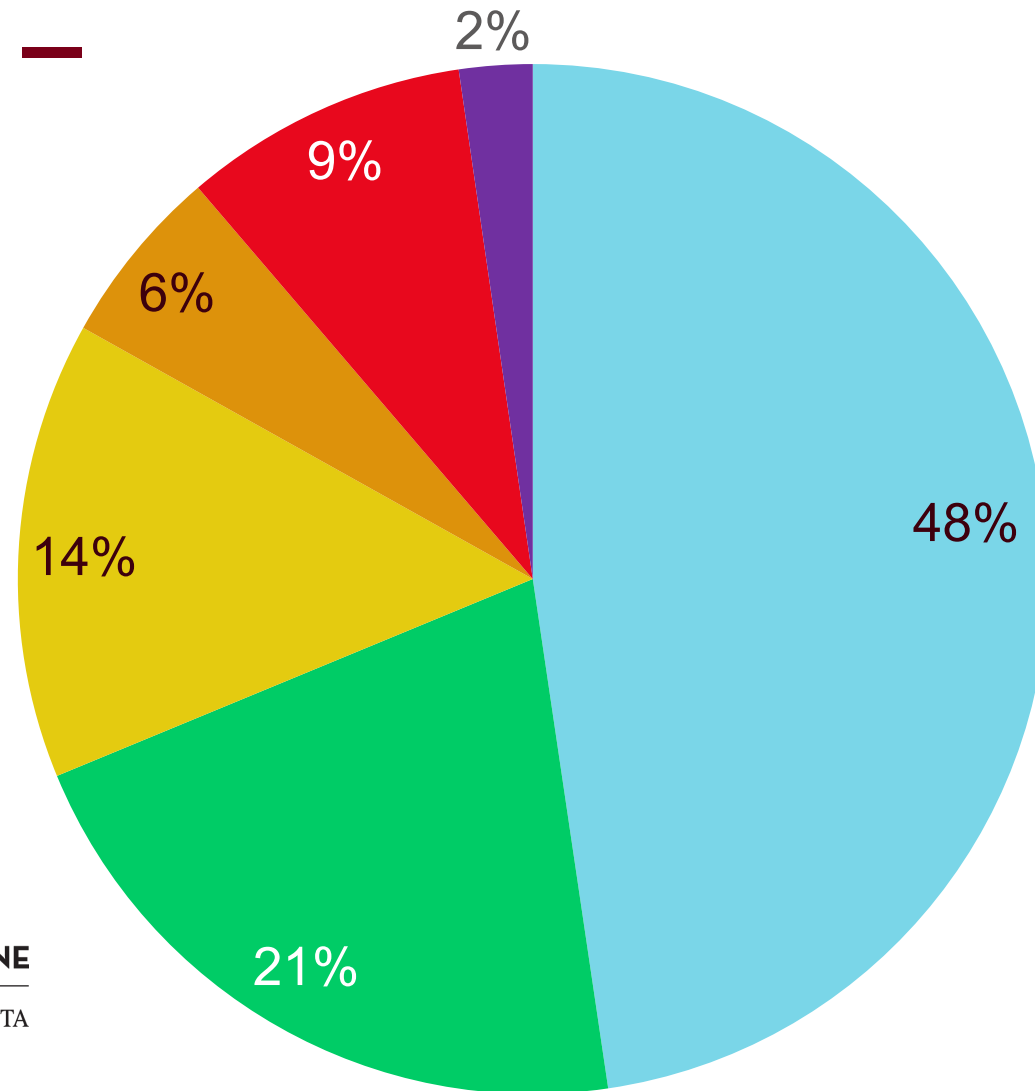
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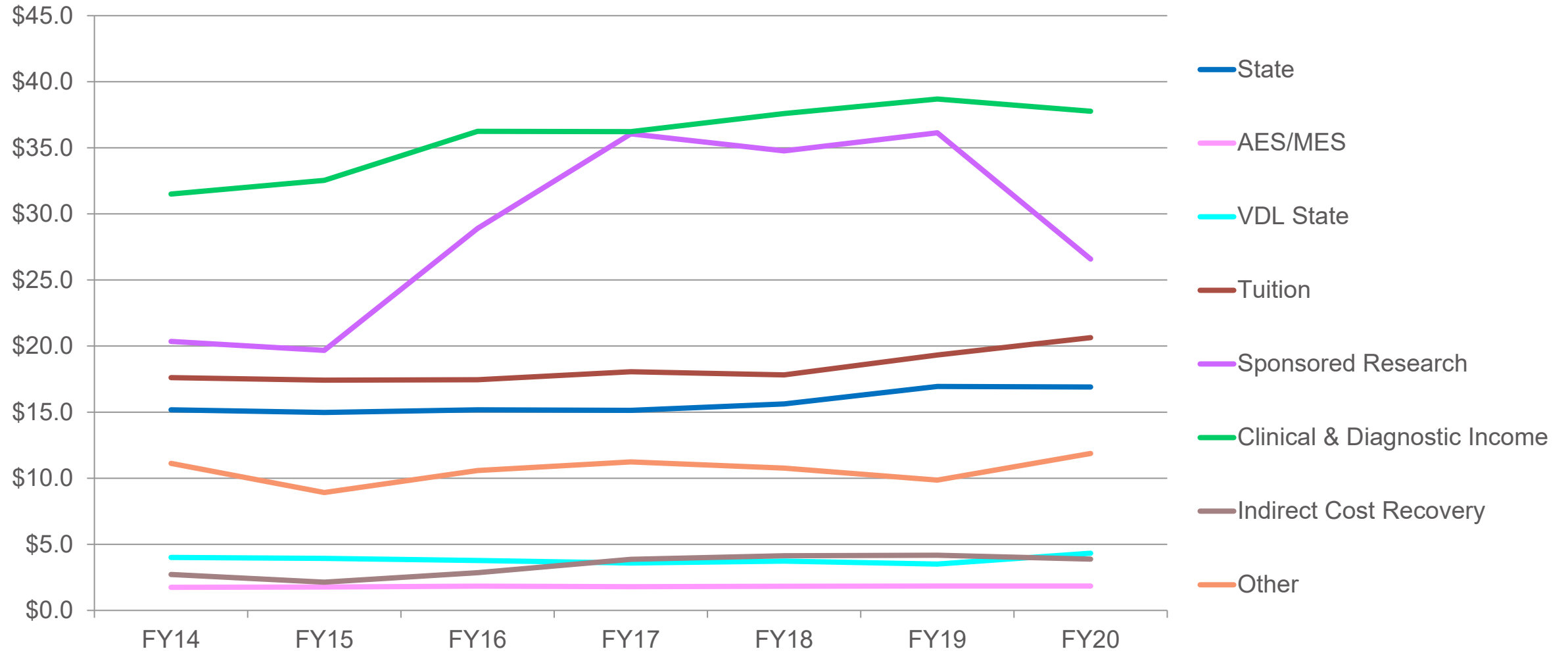
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Funding Trends – 2013-2020





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