



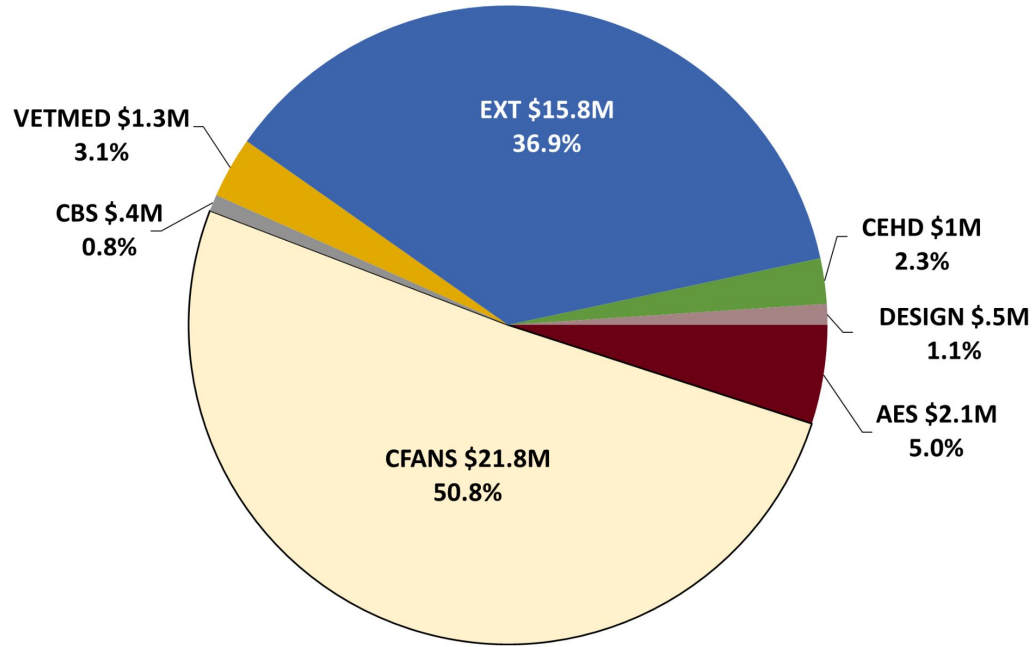
Agriculture Research and Extension

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



UNIVERSITY OF MINNESOTA
Driven to DiscoverSM

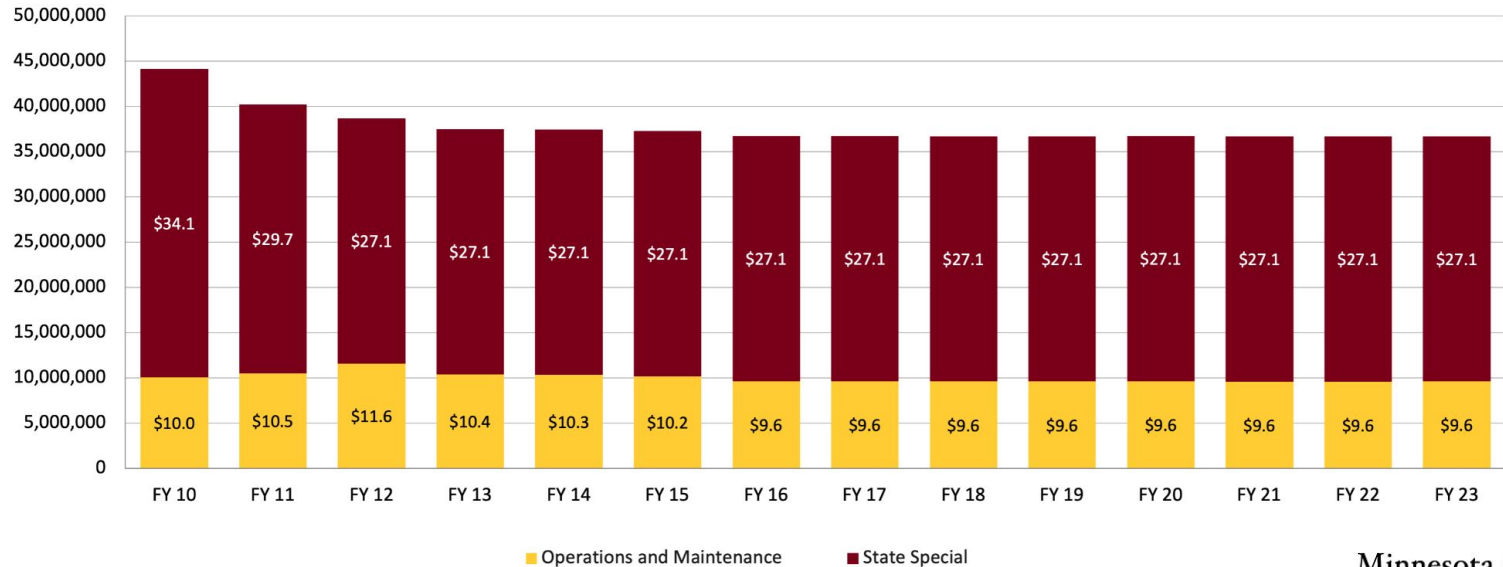
Ag State Special Funding: \$42,923,800 FY22 Distribution



Ag State Special MAES and O&M Funding

(Does not include Extension funding)

Ag State Special and Operations & Maintenance Appropriation Fiscal Years 2010 - 2023



Minnesota Agricultural
Experiment Station



Minnesota Agricultural Experiment Station manages the distribution and use of federal and state research funds with a focus on production, harvesting, processing, quality and marketing of food and agricultural products and forests and forest products. The goals of these efforts are to improve human nutrition, family and community life, rural and urban vitality, economic growth and development, and environmental quality.

Partner colleges

MAES funds scientists who work in five different University of Minnesota colleges:

- College of Food, Agricultural and Natural Resource Sciences
- College of Veterinary Medicine
- College of Biological Sciences
- College of Education and Human Development
- College of Design

Funding sources

MAES uses federal and state funds to support cross-disciplinary research and respond to emerging issues. These funds provide critical support for staff, equipment and facilities that allow MAES researchers to start innovative projects and leverage and match other external funding sources.

Federal funding sources:

- Hatch
- Hatch Multistate
- Animal Health
- McIntire-Stennis

State funding sources:

- Agriculture State Special
- Rapid Agricultural Response Fund
- Small Grains Initiative

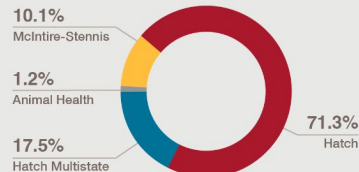
RESEARCH BY THE NUMBERS

300+ active USDA-approved research projects

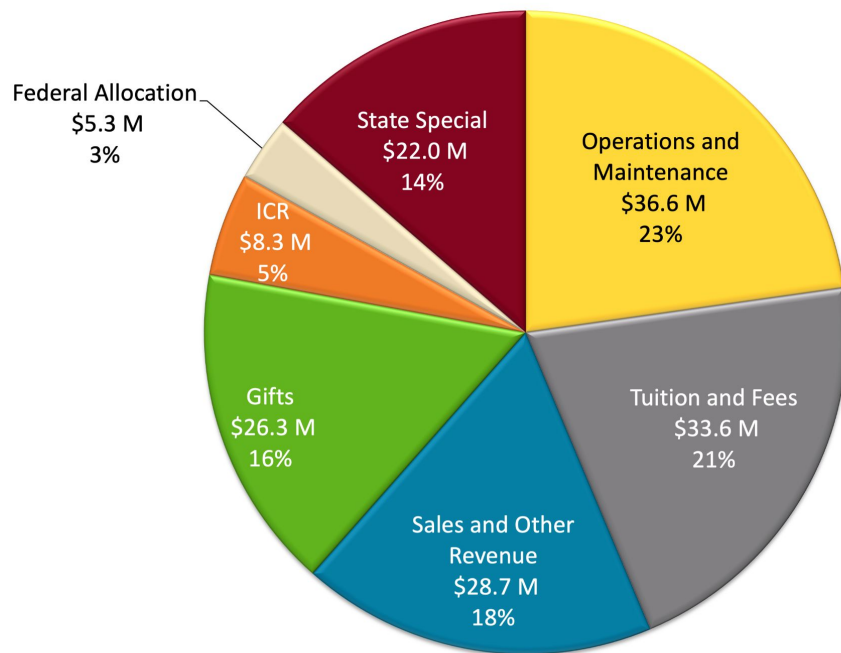
230+ researchers with MAES projects

\$7.5M in federal capacity funds in FY22

Federal FY23 Funding allocation amounts

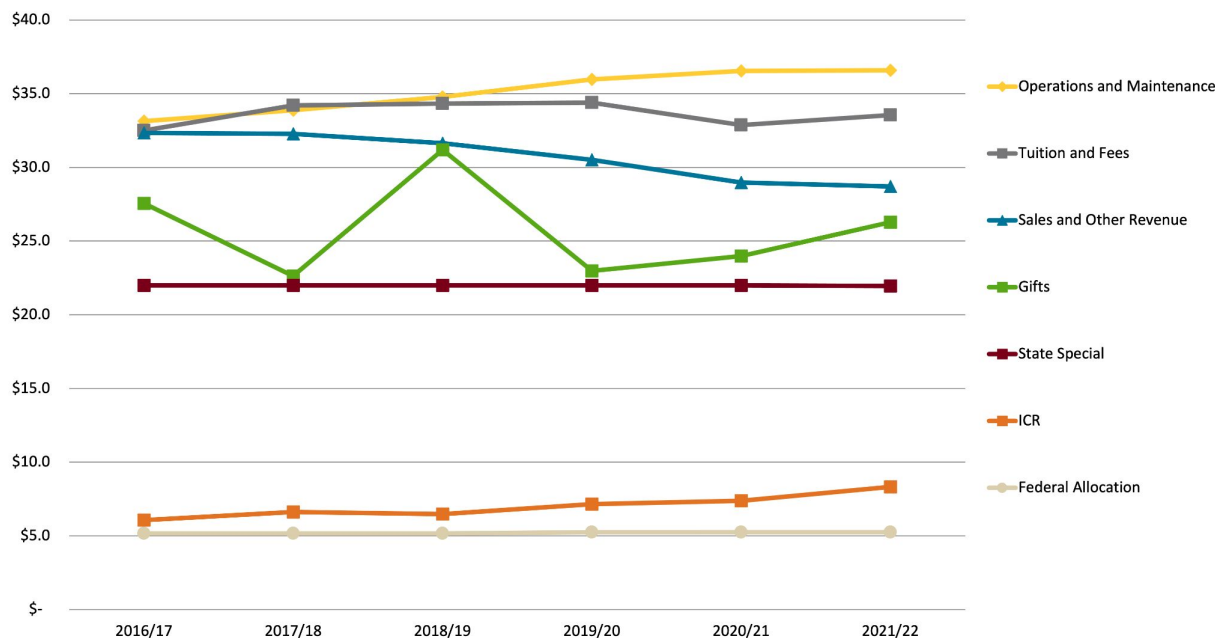


College of Food, Agricultural and Natural Resource Sciences 2021-22 Resources: \$160.6 million



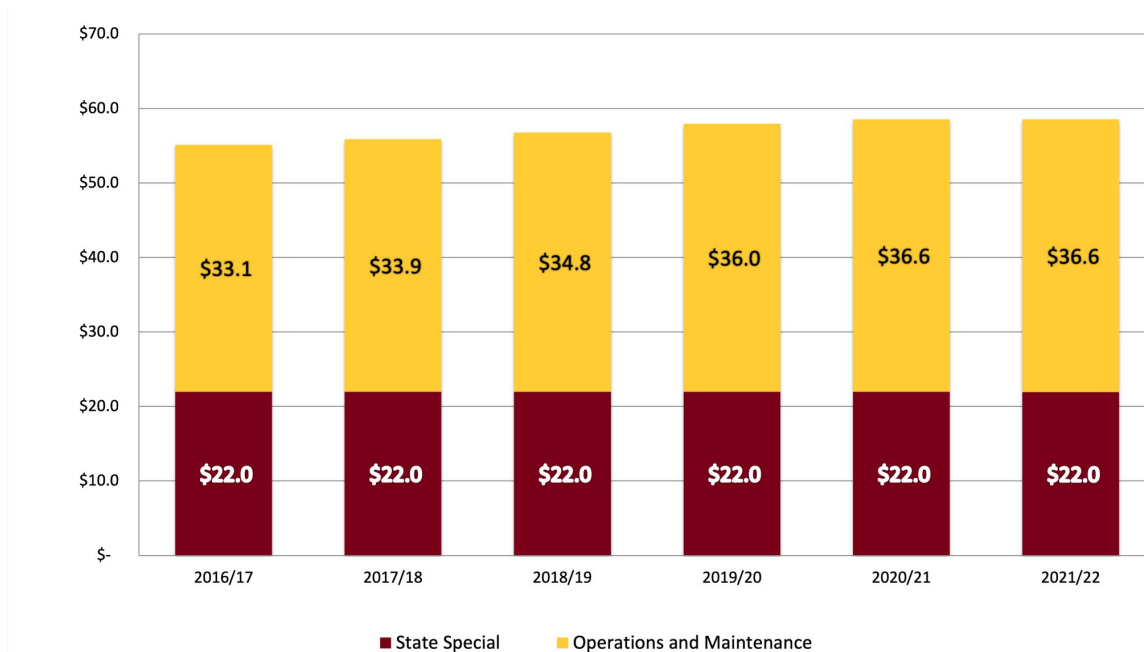
CFANS
COLLEGE OF FOOD, AGRICULTURAL
AND NATURAL RESOURCE SCIENCES

College of Food, Agricultural and Natural Resource Sciences Resource Trends (millions)



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



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CFANS

Where **science** drives
a **sustainable** future

Grand Challenge research and education investments

- Food security, agricultural productivity
- Invasive species and biodiversity/pest and disease dynamics
- Renewable energy and climate adaptation
- 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

660 degrees



awarded to undergraduates and graduates by CFANS
in 2021-22 to help fill critical needs in Minnesota's
agriculture, food, and natural resource workforce

People

Fall 2022

1,765	Undergraduates
553	Graduate Students
232	Faculty
854	Staff
30,456	Alumni



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.

\$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 (AGRETT) program.



1. Crop and livestock
productivity



2. Microbial science



3. Water quality and
climate resilience



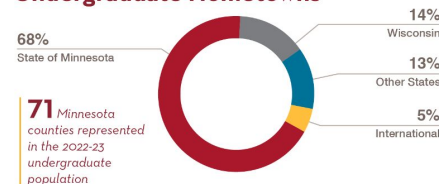
4. Agricultural technology
and decision-making

5. Nutrient recycling and
management

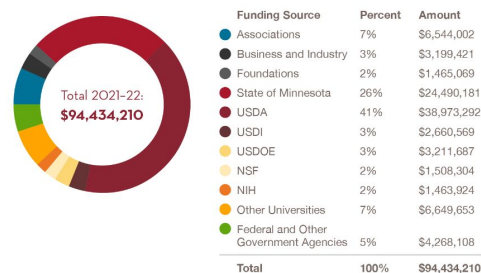
6. Agro-ecological
innovation

7. Technologies for
managing pest resistance
and climate adaptation

Undergraduate Hometowns



Sponsored grant awards received



Sponsored grant
awards leverage
state funding **\$94,434,210** + Sponsored Grant Award Projects **\$21,953,054** = State Special Funding

CONNECT WITH US
TO LEARN MORE



cfans.umn.edu

88%

of CFANS students complete
an internship in their major*

*Data from 2019-20

\$3.2 million

in CFANS scholarships are awarded
to undergraduate students each year

89%

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

*Data from 2019-20

**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



CFANS
COLLEGE OF FOOD, AGRICULTURAL,
AND NATURAL RESOURCE SCIENCES

TOTAL SPONSORED PROJECT AWARDS

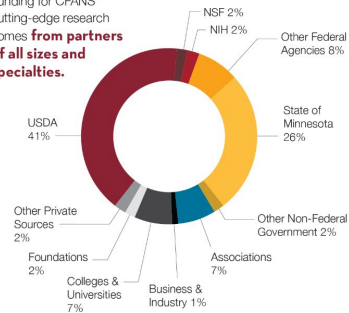
CFANS received **\$95,050,541** in sponsored project awards in FY22.



FUNDING SOURCES

Percentage by dollar amount

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



464

Active research projects at the **10 CFANS Research & Outreach Centers** in FY22



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

171 Distinct funders provided funding for CFANS researchers in FY22

488

Sponsored project awards received by CFANS in FY22

651 New sponsored project proposals submitted by CFANS in FY22

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."**

2

new startups launched in FY22

16[®]

trademarks and patents issued in FY22

13

new startups launched in past five years

72

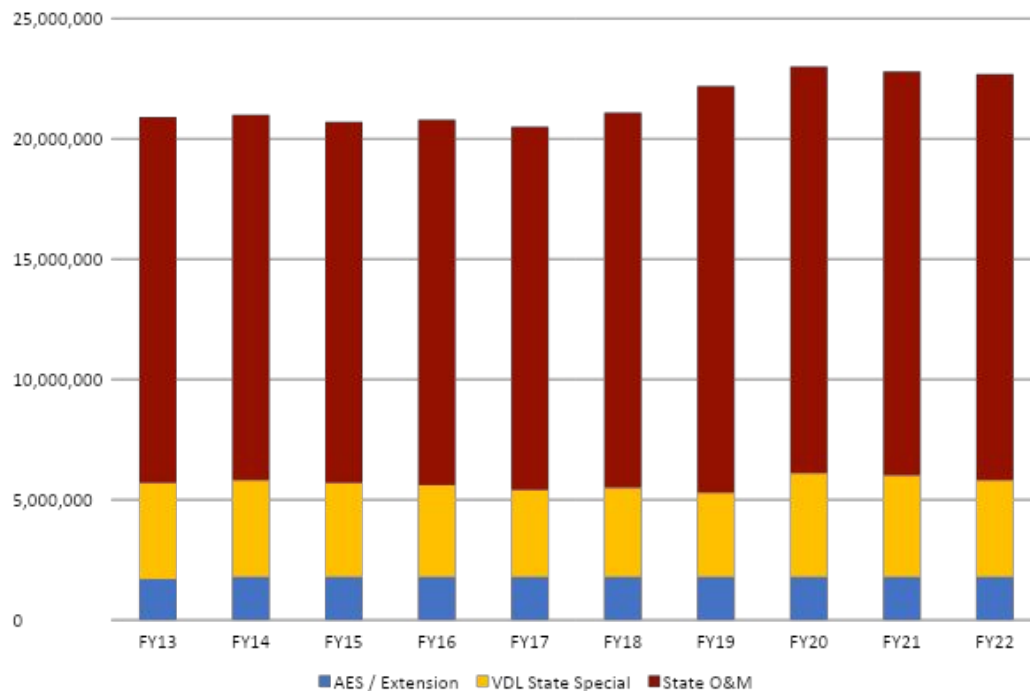
trademarks and patents issued in past five years



College of Veterinary Medicine State Funding Trends

8.6% increase
over 10 years

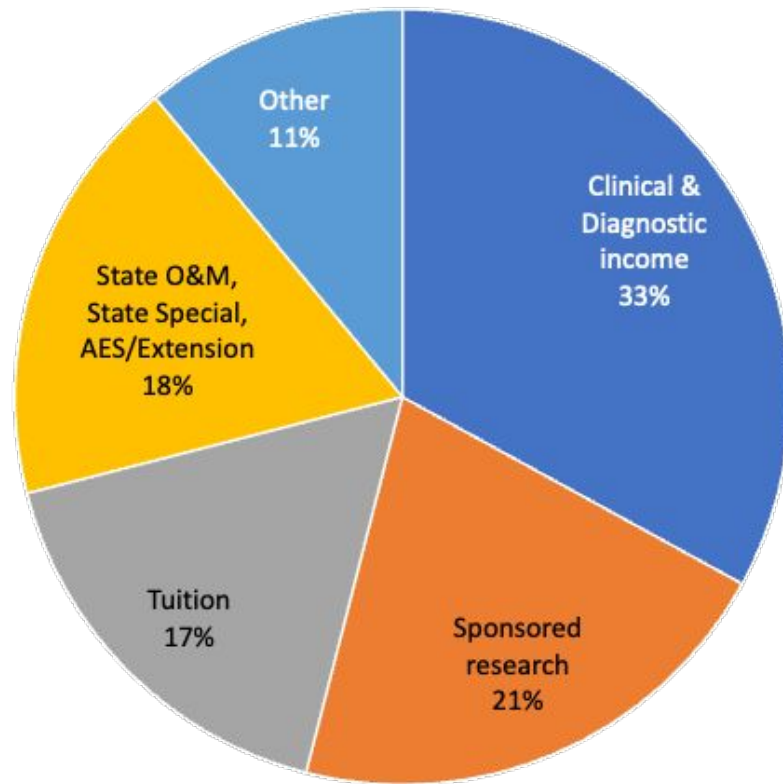
29.8% inflation
over 10 years



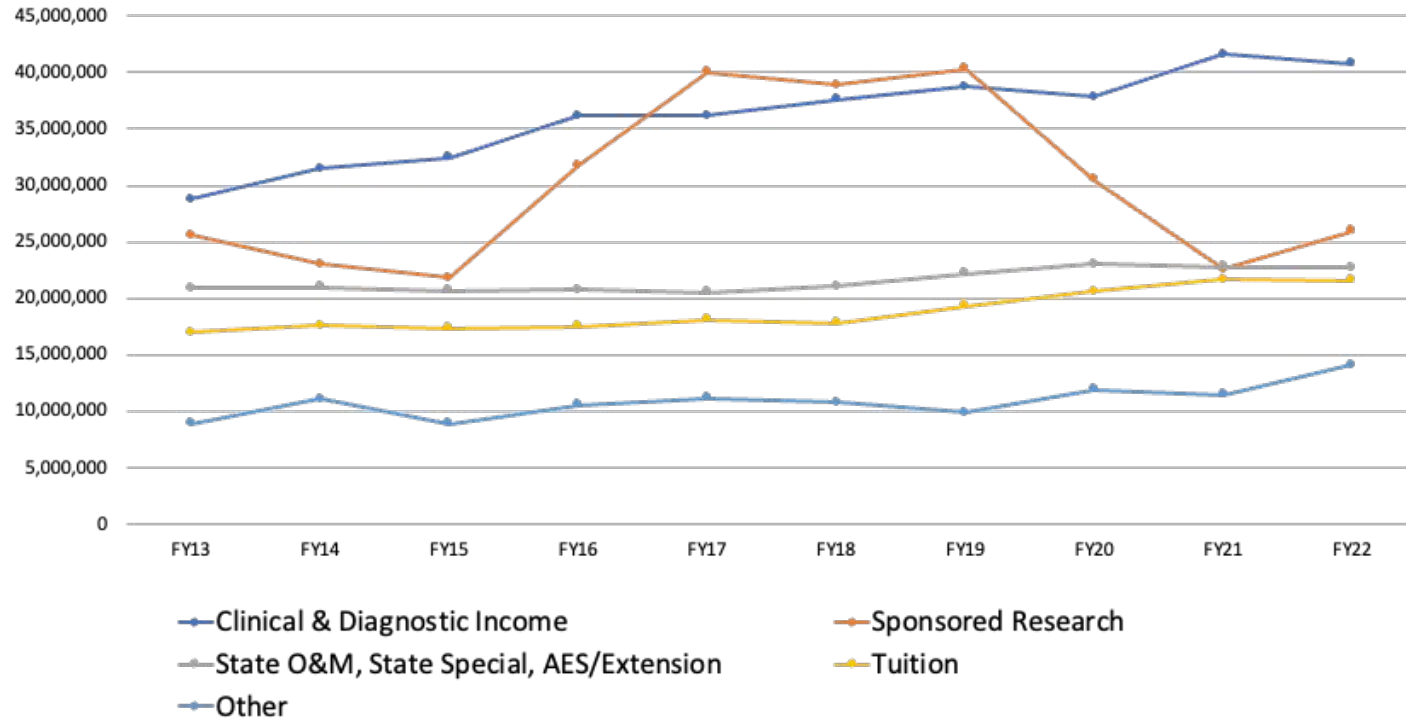
College of Veterinary Medicine FY2022 Resources - \$125.3m

- Clinical & Diagnostic Income - \$40.8m
- Sponsored Research - \$26m
- Tuition - \$21.6m
- State O&M, Diagnostic Lab/State Special, AES/Extension - \$22.7m
- Other - \$14.1m

ROI on state investment = \$5.52



College of Veterinary Medicine Resource Trends



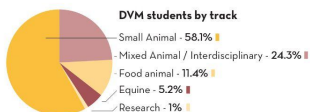


DVM students

1489 applicants for 105 seats in the Class of 2027

The Class of 2023 has 103 students - 53 residents / 50 non-residents

22 Veterinary Food Animal Scholars Track students



Graduate students

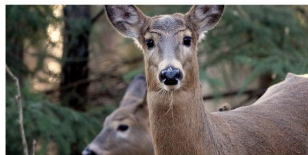
77 PhD students 14 Master's students

Advancements



Veterinary shortage

Our partnership with South Dakota State University will produce more veterinarians. Our long-standing VetFAST program has produced over 100 veterinarians who practice in rural areas with a focus on food animals. Meanwhile, a community medicine initiative is teaching students to work in underserved communities.



Chronic wasting disease in deer

In 2022 we created a website of information for deer farmers. Our research team has completed an evaluation of a 4-hour field test for CWD. New state funding is driving an ambitious suite of research to better understand this disease.



Responding to outbreaks

The Veterinary Diagnostic Laboratory (VDL) and The Raptor Center are on the front lines of responding to highly-pathogenic avian influenza (HPAI). The VDL performed 1 in 5 of the national HPAI tests in 2022.



Monitoring antimicrobial resistance

Our nationwide program is the first to measure how frequently small animal veterinarians prescribe antibiotics for small animals. An early finding: Re-think use of antibiotics for diarrhea in dogs.

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
- Assisted MN Dept. of Health with COVID testing & supplies
- Performed 20% of nation's HPAI testing in 2022

Veterinary Medical Center



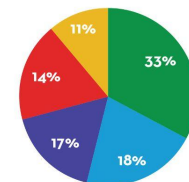
- Nearly 38,000 patient visits - one of the busiest veterinary teaching hospitals in the world
- 57 specialists, over 50 veterinarians, and nearly 150 technicians supporting the Upper Midwest veterinary community

The Raptor Center



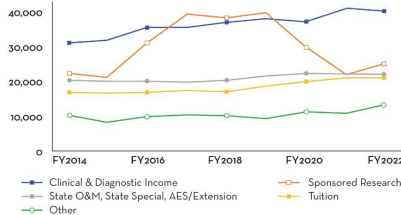
- Treated its 30,000th patient in 2022 - a red-tailed hawk
- Educating thousands through virtual and in-person programs
- Training veterinarians and wildlife rehabilitators around the world in raptor medicine and humane care.

Resources FY 2022 - \$125.3m



Funding

College of Veterinary Medicine Resource Trends 2014 - 2022



- Clinical & Diagnostic Income - \$40.8m
- Sponsored research - \$26m
- Tuition - \$21.6m
- State O&M, Diagnostic Lab/State Special, AES/Extension - \$22.7m
- Other - \$14.1m

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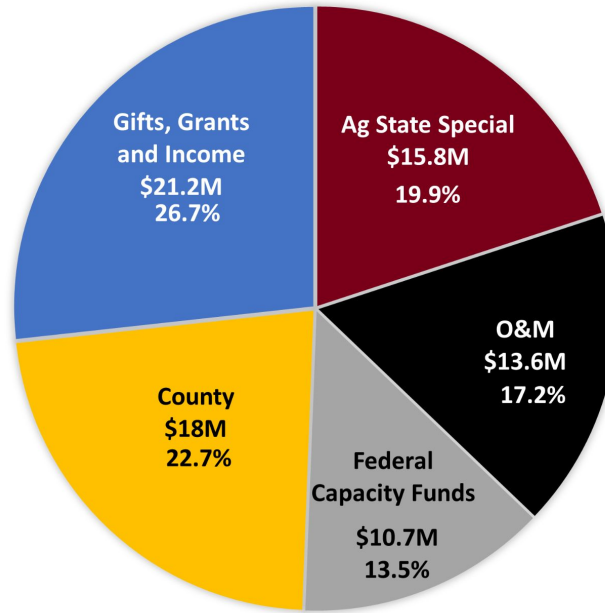
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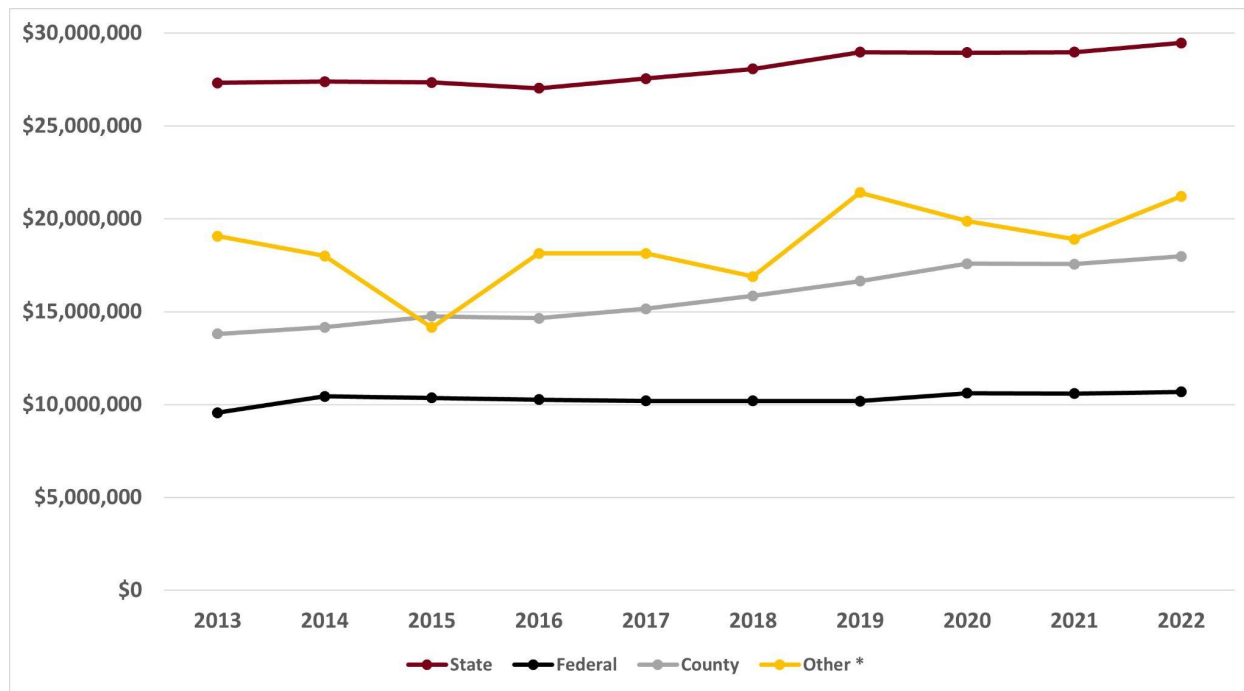
www.vetmed.umn.edu

@umnCVM

Extension 2022-2023 Budget: \$79.3M



Extension Funding Trends





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 rural, suburban, urban and tribal communities with the University of Minnesota

87

Extension is in every county. 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.



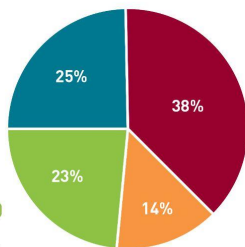
Budget

Grants, gifts and other: \$19 million (25%)

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

Counties: \$18 million (23%)

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



State: \$29 million (38%)

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

Federal: \$11 million (14%)

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

Extension is the front door to the University for many Minnesotans, providing tools to build the future they envision.

More than **1 million** people are reached annually by Extension education.



Minnesota 4-H empowers all youth to lead

822 youth in **56** counties took on Ambassador-level leadership roles, designing a statewide service project and peer learning experiences. Youth engaged in **50+** projects, performing **800+** hours of service.



Strengthening Minnesota's food and agriculture

Extension research and education improve crop yields, animal health, farm productivity and water conservation across Minnesota's **67,400** farms.



Promoting responsible lawn and garden practices

2,790 Master Gardener volunteers contributed **135,822** hours planting pollinator-friendly gardens, creating resilient landscapes and helping those who are struggling.



Creating healthier families for 60,852 people

SNAP-Ed "I Can Prevent Diabetes" telehealth received 5 years of full recognition from the National Diabetes Prevention Recognition Program, while Extension reached **3,284** rural Minnesotans coping with the opioid crisis.



Protecting natural resources, including soil, water and woodlands

2,000+ Extension Natural Resources volunteers restored public lands, managed invasive species in their communities, collected data for scientific research, and taught better land stewardship.



Delivering knowledge and training to support community leadership, economic development and tourism

132 research reports and **32** community-led groups focused on economic impacts, facilitation skills and welcoming newcomers.



UNIVERSITY OF MINNESOTA EXTENSION

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The cost to prepare this UMN Agriculture Research and Extension report is \$300.

