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UNIVERSITY OF MINNESOTA

Government and Community Relations
Office of the President

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Fax: 612-624-2800
govrelations.umn.edu
Email: govrelations@umn.edu

TO: Katie Elmore, Minnesota Legislative Reference Library

FROM: Keeya Steel, University of Minnesota Office of Government and Community Relations

DATE: January 31, 2017

RE: University of Minnesota Agriculture and Extension Service Report

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Enclosed are two copies of the mandated report, University of Minnesota Agriculture and Extension Service Report, pursuant to 2015 Minnesota Laws Chapter 69 Article 1 Section 5 Subdivision 4.

This report can also be found online: http://government-relations.umn.edu/state/legislative-materials

If you have any questions regarding this report or to obtain additional copies, please contact the Office of Government and Community Relations at 612-626-9234.

cc: Senator Michelle Fischbach, Senate Higher Education Finance and Policy Chair
Senator Greg Clausen, Senate Higher Education Finance and Policy Ranking Minority Member
Representative Bud Nornes, House Higher Education & Career Readiness Policy and Finance Chair
Representative Gene Pelowski, House Higher Education & Career Readiness Policy and Finance Ranking Minority Member
Senator Torrey Westrom, Senate Agriculture, Rural Development, and Housing Finance Chair
Senator Kari Dziedzic, Senate Agriculture, Rural Development, and Housing Finance Ranking Minority Member
Representative Rod Hamilton, House Agriculture Finance Chair
Representative Jeanne Poppe, House Agriculture Finance Ranking Minority Member

Agricultural State Special Funding

February 2017

1 Agricultural State Special Funding FY 2016

2 MN Agricultural Experiment Station Funding FY 2010 - 2016

3 U of M Extension Funding FY 2010 - 2016

4 College of Food, Agricultural and Natural Resource Sciences (CFANS) Funding FY 2010 - 2016

5 College of Veterinary Medicine Funding FY 2010 - 2016

6 Special Initiatives
- Rapid Agricultural Response Fund and Projects
- AGREETT

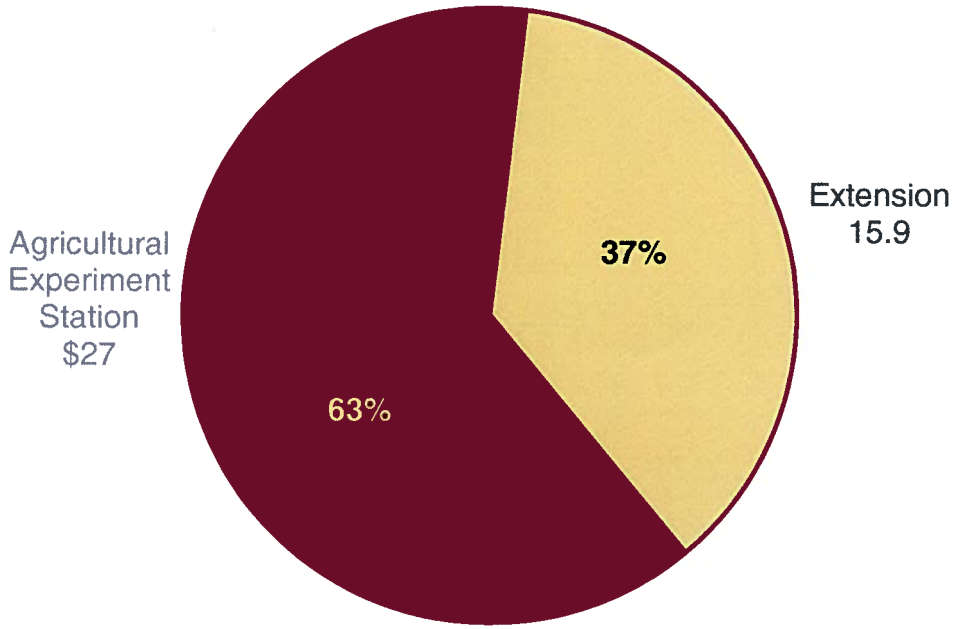
7 Additional Information

8 Select Legislative Committees

University of Minnesota

FY16 Agriculture State Special Appropriation $42.9M

(Numbers in Millions)



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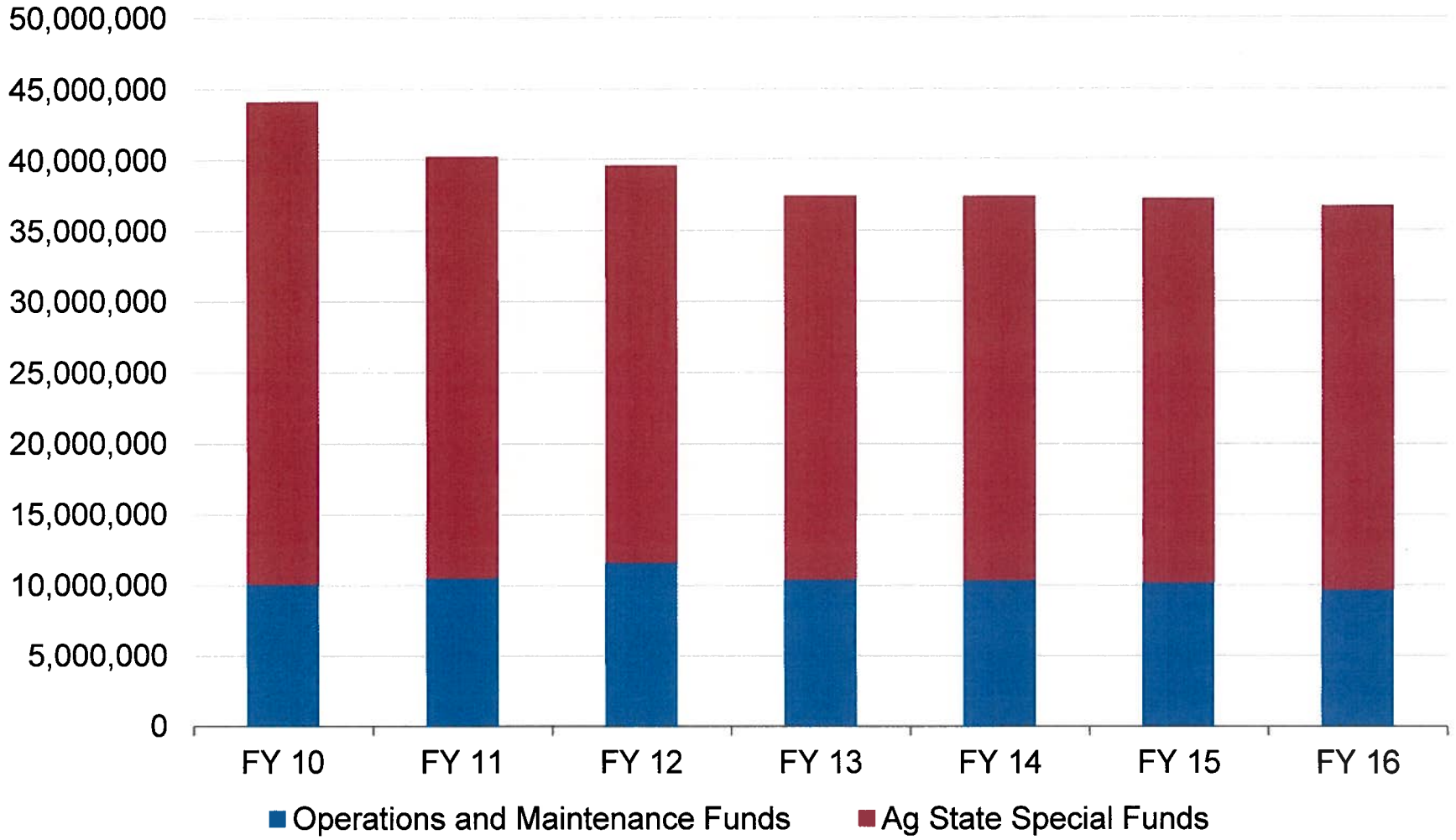
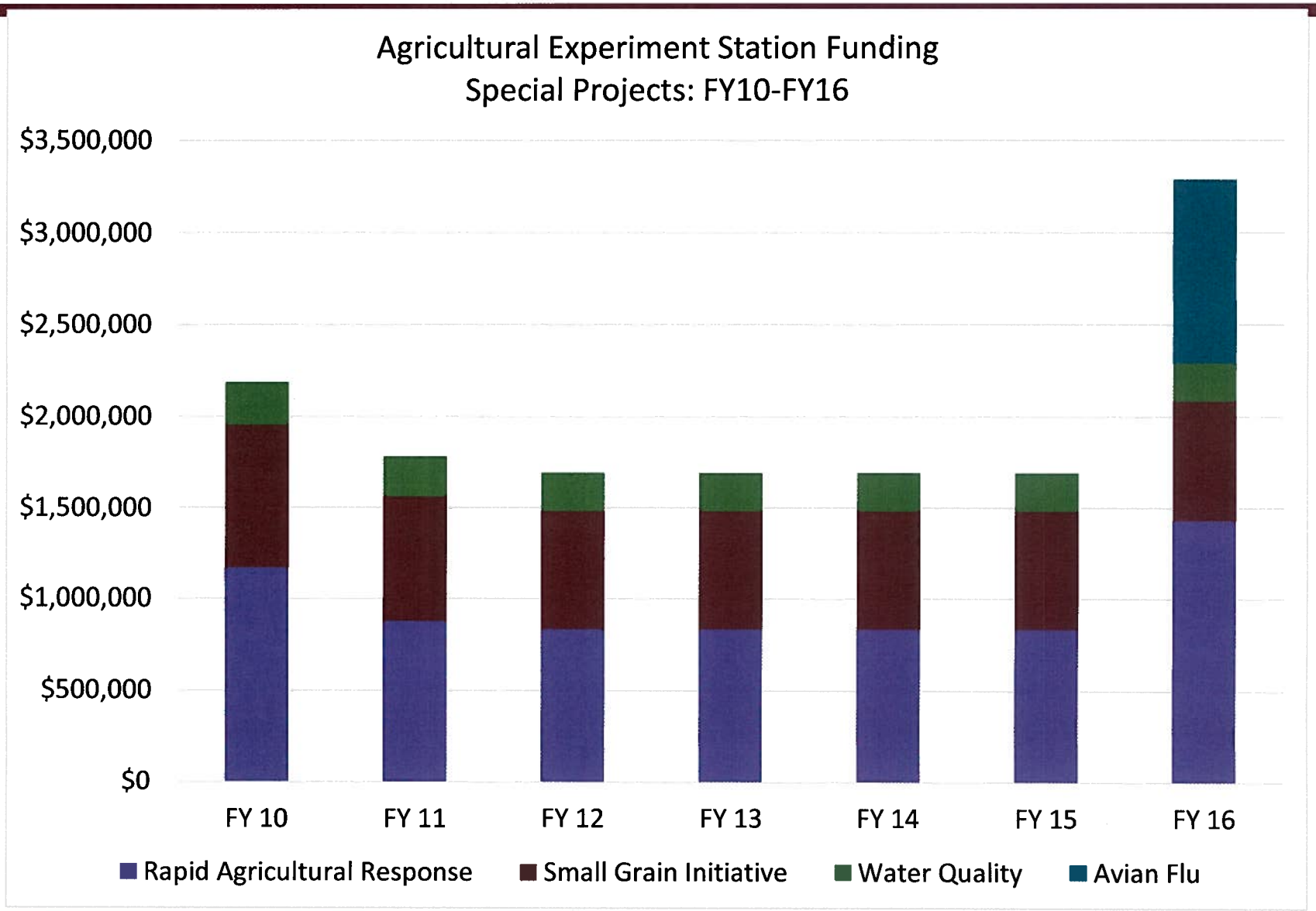
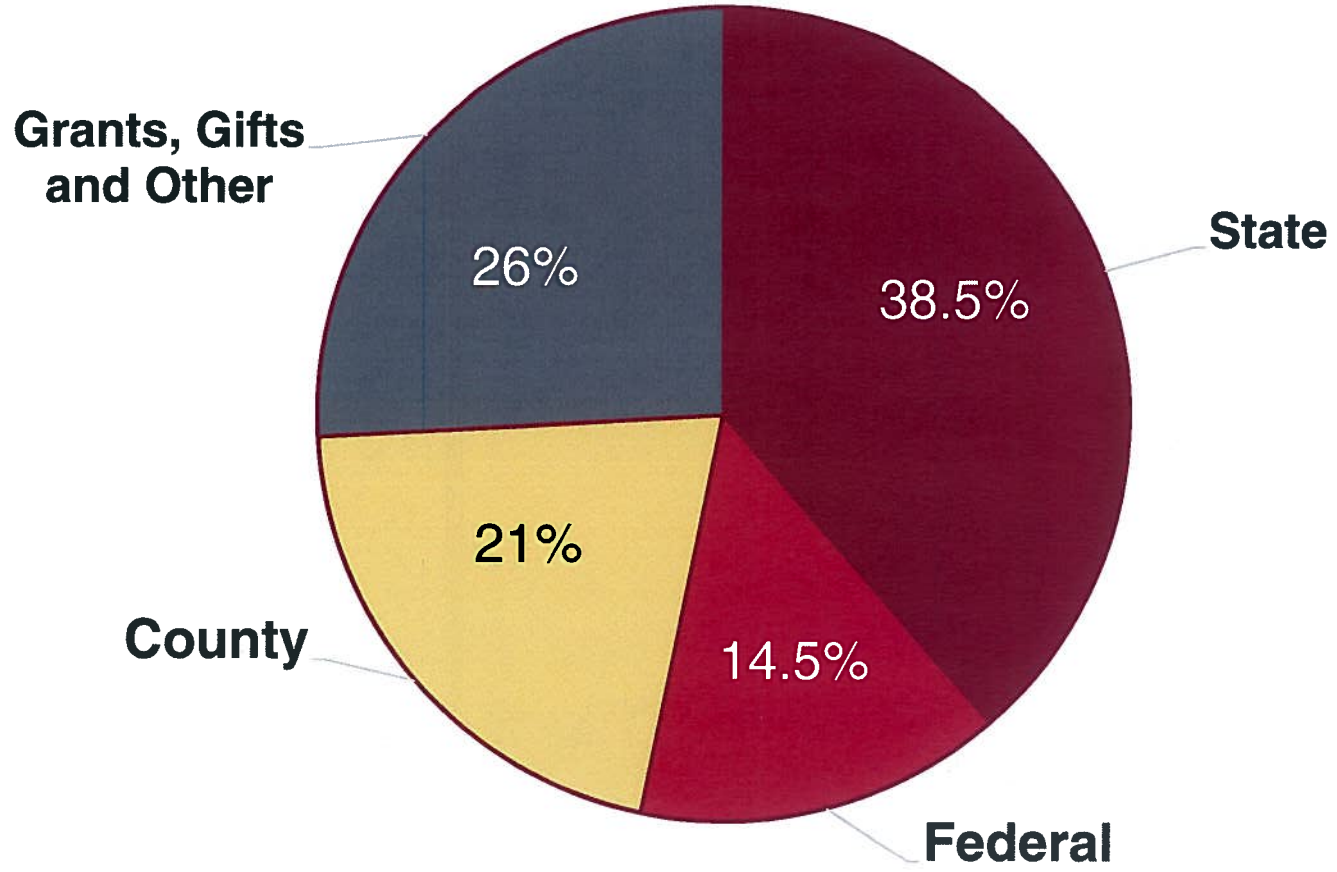
University of Minnesota Agricultural Experiment Station
Fiscal Year 2010 - 2016




Agricultural Experiment Station Funding
Special Projects: FY10-FY16
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
FY 10
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
Rapid Agricultural Response
Small Grain Initiative
Water Quality
Avian Flu

EXTENSION 2016 BUDGET: $70.1M



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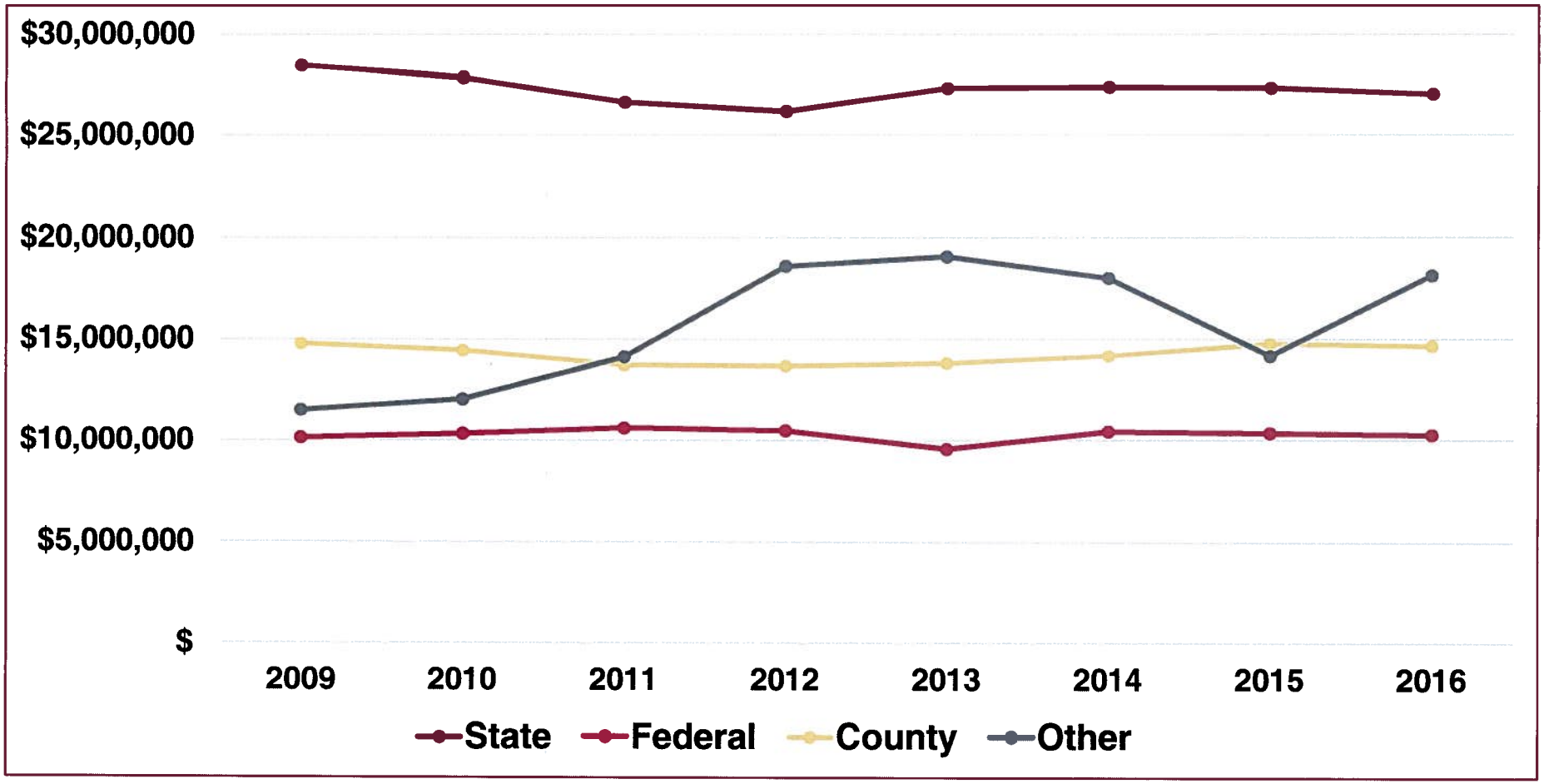
EXTENSION FUNDING TRENDS



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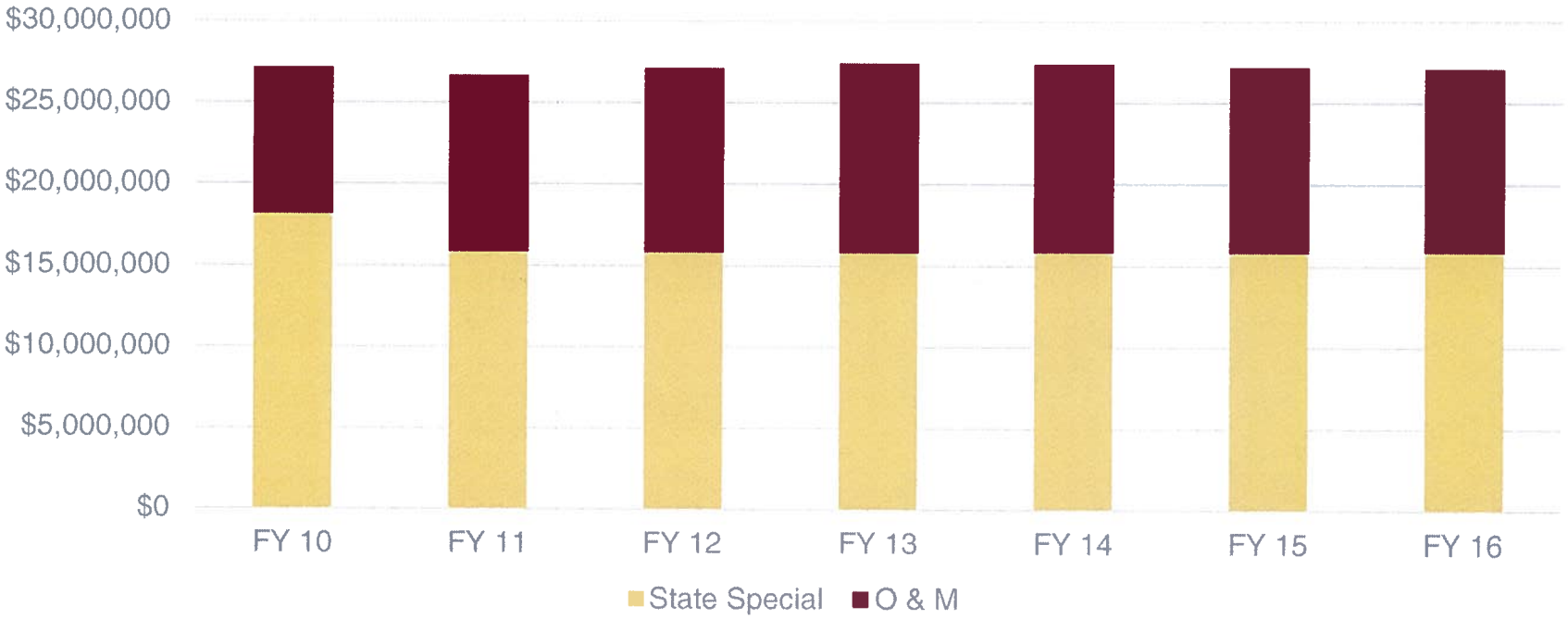
MN EXTENSION

State Specials and O&M FY10-FY16



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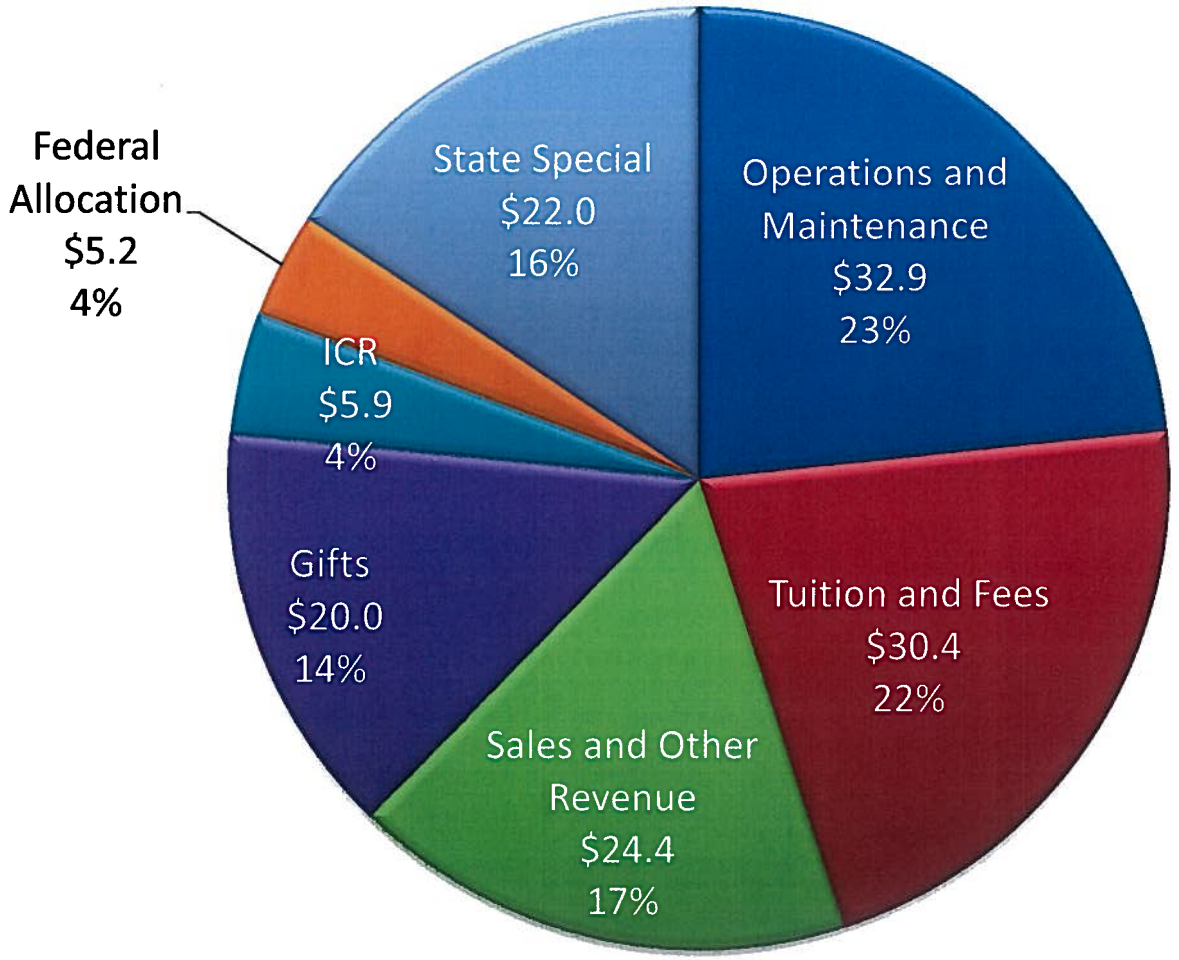
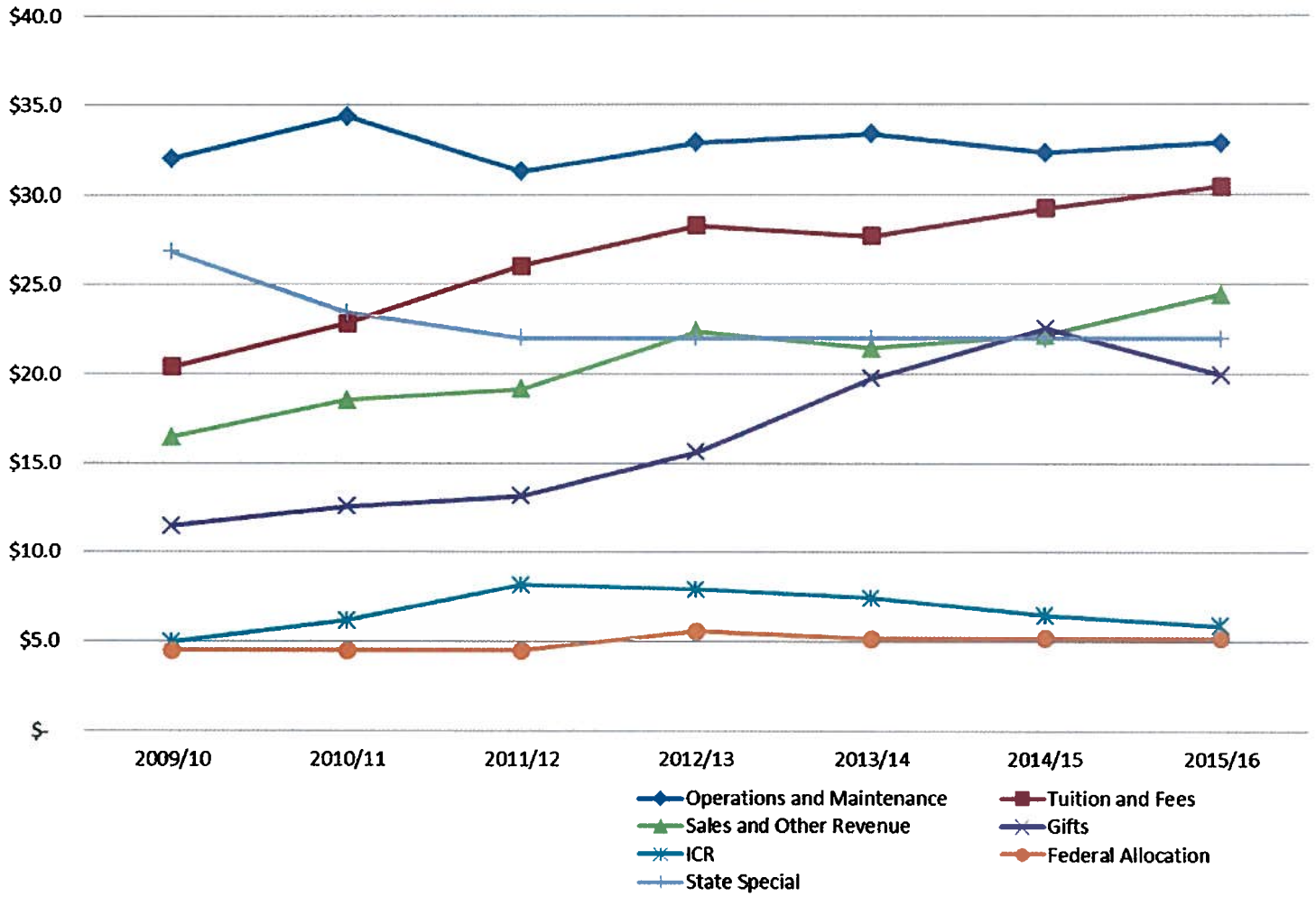
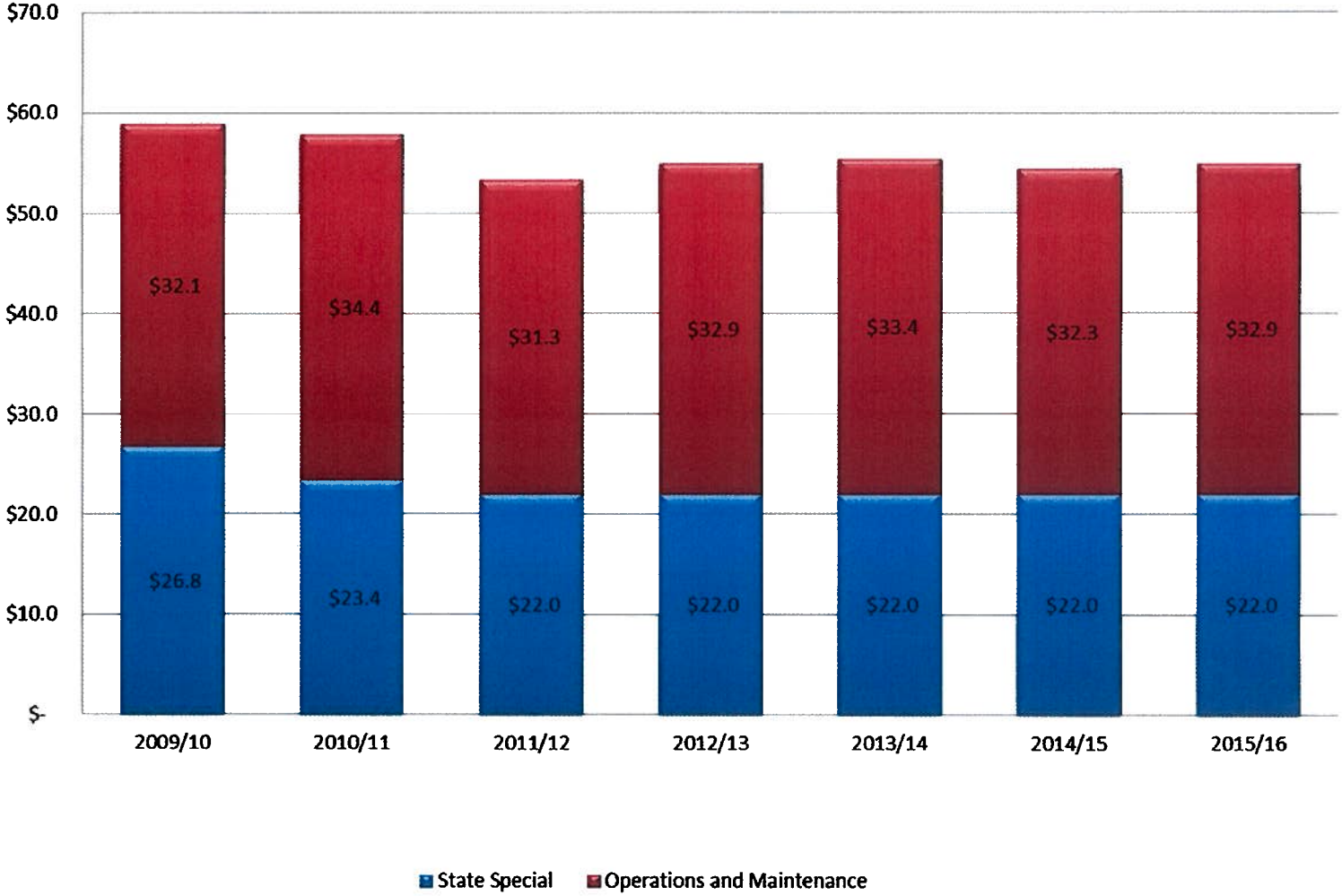
College of Food, Agricultural, and Natural Resource Sciences
2015-2016 Resources: $140.8 Million



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

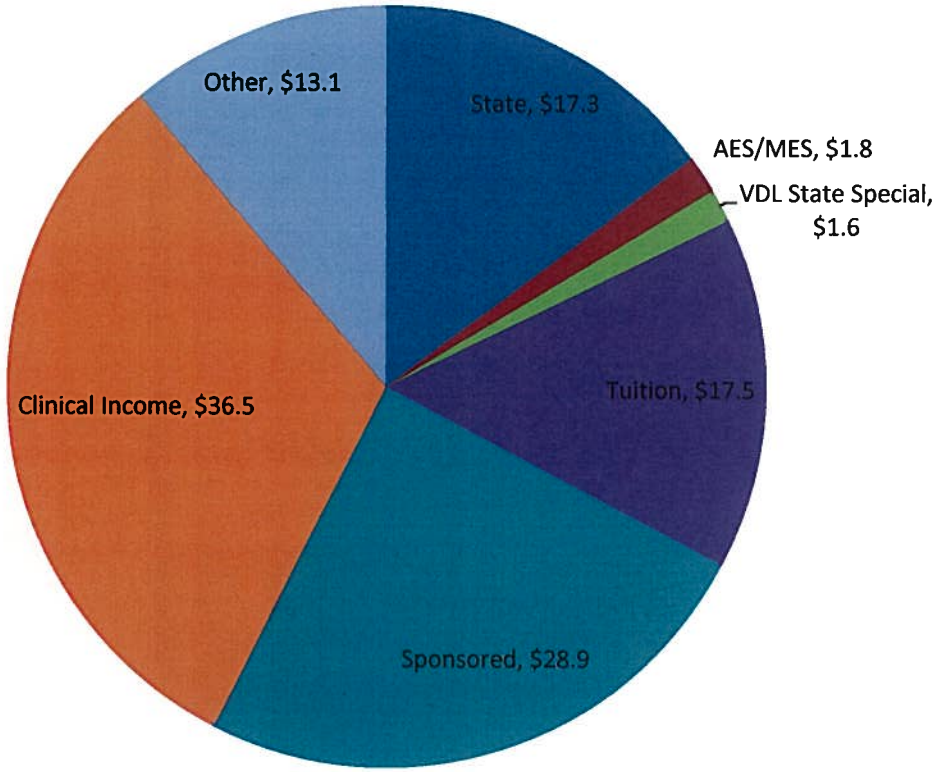


College of Food, Agricultural, and Natural Resource Sciences
State Funding Trends (Millions)



CVM FY16 Budget - $116.8M

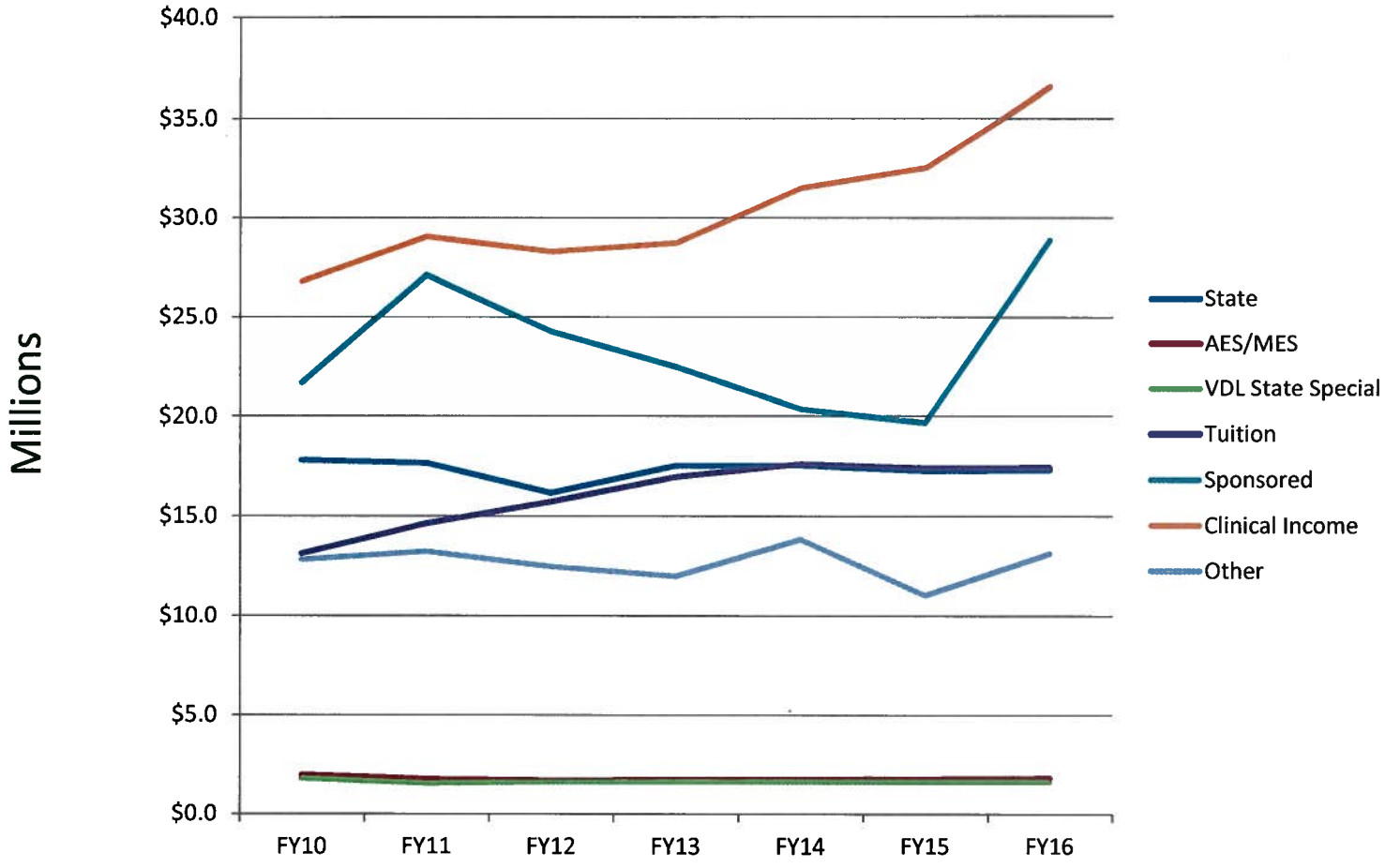
($ in Millions)



UNIVERSITY OF MINNESOTA

College of Veterinary Medicine

CVM Funding Trends



UNIVERSITY OF MINNESOTA
College of Veterinary Medicine

RARF Funded Projects 2016-2017

- **Sandra Godden** - Evaluation of a longer duration protocol to heat-treat Bovine Colostrum on colostrum characteristics, and on passive transfer, health and Johne's Disease Control in Minnesota dairy calves
- **Bo Hu** - Reducing sulfide generation by electrochemical treatment of liquid manure in deep-pit manure storage systems
- **Johny Anup** - Investigating the efficacy of multiple antimicrobial interventions against Salmonella Heidelberg colonization in turkeys
- **Angela Orshinsky** - Development of a risk assessment model for tomato leaf mold infection in Minnesota
- **Christopher Philips** - Creating a risk-based decision support tool and early-warning system for Spotted-wing Drosophila
- **Patrick Redig** - Surveillance for high-consequence poultry diseases in wild bird reservoirs: Influenza and Newcastle Disease
- **Montserrat Torremorell** - A comprehensive surveillance system to control influenza virus in pigs
- **Gerald Cramer** - Evaluating the Relationship Between Hyperketonemia and Lameness in MN Dairy Herds
- **George Heimpel** - The role of Insecticidal Seed Treatments in Limiting Biological Control of Soybean Aphid
- **Bo Hu** - Mechanism Study of Manure Foaming in the Swine Pit Storage
- **William Hutchison** - Canopy Management and High Tunnel use for Maximizing Control of Spotted Wing Drosophila in Raspberry
- **Yuzhi Li** - Using a Novel Approach, Social Network Analysis, to Remedy Animal Welfare Concerns Raised by Consumers
- **Ian MacRae** - Remote Sensing in Agricultural Production
- **Douglas Marthaler** - Transdisciplinary Approach to Characterize the Diversity of Streptococcus Suis, Leading to Rapid Genotyping by Matrix Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF MS)
- **Srinand Sreevatsan** - A Universal Nanoparticle Based Mucosal Delivery Subunit Vaccine for Animal Disease
- **Fabio Vannucci** - Transmission of Senecavirus A by Artificial Insemination and the Impact on the Production of Piglets

RARF Funded Projects 2014-2015

- **Robert Blanchette** - Rapid Diagnostic Methods to Combat a New Disease of Conifer Trees in Minnesota: Heterobasidion Root Rot causing Circles of Death
- **Jim Collins** - Development of a Rapid, High Throughput Real-time RT-PCR Diagnostic Tool and Complete Genome Characterization of US Porcine Epidemic Diarrhea Virus
- **Jim Collins** - Identifying the genetic diversity of swine group B and C rotaviruses: Steps Toward Developing a Universal Rotavirus B / C Subunit Vaccine
- **Ruth Dill-Macky** - Bacterial Leaf Streak of Wheat and Barley
- **Connie Gebhart** - Analysis of Virulence-Associated Genes in Known and Novel Brachyspira Species to Develop Pathogen-Specific Diagnostic Assays
- **Jeffrey Gunsolus** - Crop Rotation Strategies for Management of Glyphosate-Resistance Weeds
- **George Heimpel** - Experimental releases of a Newly-Approved Asian Biological Control Agent of the Soybean Aphid
- **Bradley Heins** - Integration of Renewable Energy Technologies to 'Green' Energy Consumed in Dairy and Swine Production Systems
- **Bill Hutchison** - Population Dynamics of Spotted Wing Drosophila (SWD) in Minnesota: Predicting and Examining the Geographic Spread of an Invasive Fruit Pest
- **Timothy Johnson** - Role of the Bacterial Microbiome in Optimal Commercial Turkey Production
- **Robert Koch** - Insecticide Resistance Management (IRM) in Minnesota Soybean
- **Dean Malvick** - Advancing Knowledge to Manage Goss's Wilt of Corn, a New Disease in Minnesota
- **Marla Spivak** - Responding to an S.O.S. from the Commercial Beekeeping Industry
- **Zheng Xing** - Identification, Culture and Virulence Studies of Heartland Virus-like Bunyaviruses in Minnesota Food Animals

AGREETT FUNDING

- Positions Identified:
  - 10 CFANS – 5 joint extension
  - 5 Extension Educators
  - 4 CVM – 1 joint CFANS, 2 joint Extension

Interwoven

- First year – Infrastructure Investment
  - Soils Testing, Oils Testing, Imaging tech AGP, Cloquet Forestry ($3.56 mill) CVM & CFANS: Animal Health and Food Safety ($550,000)

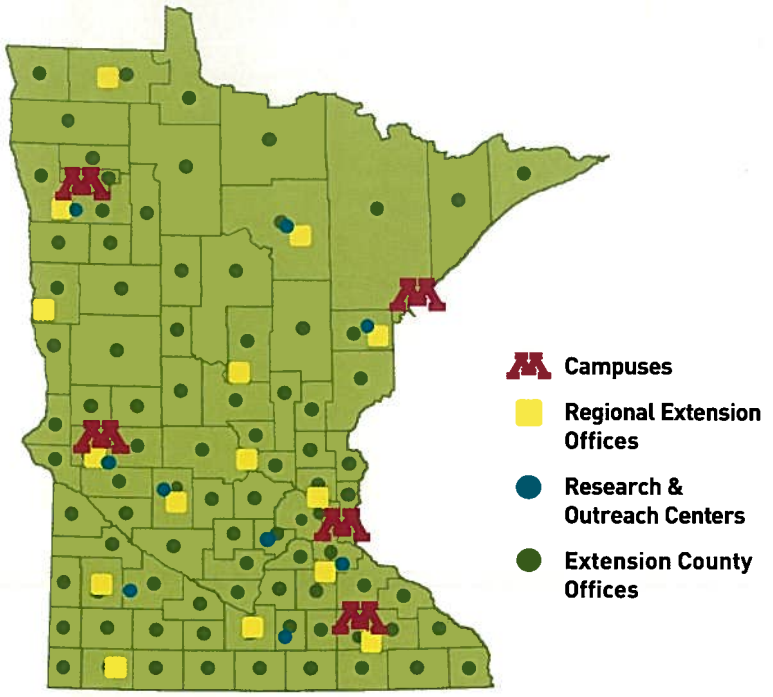
- Technician Bridging $250k recurring
- RARF $600,000 recurring
- HPAI $1,000,000 recurring
- 2020 Second round investment – as soon as first round underway – then begin identification process

UNIVERSITY OF MINNESOTA | EXTENSION

Creating a Stronger Minnesota through Education and Research

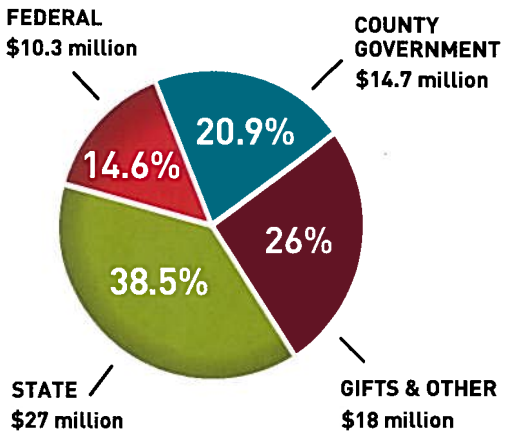
University of Minnesota Extension discovers science-based solutions, delivers practical education and engages Minnesotans to build a better future.

Connecting every county with the University of Minnesota



2017 BUDGET

EXTENSION FEDERAL, STATE AND COUNTY FUNDING



Together we create a better world through:

VIBRANT COMMUNITIES

THRIVING YOUTH

HEALTHY FOOD

CLEANER WATER

STRONGER FAMILIES

University of Minnesota Extension Mission:

Making a difference by connecting community needs and University resources to address critical issues in Minnesota.

DISCOVERING SOLUTIONS TO TODAY'S PROBLEMS

- Cleaner, safer water supply
- Pollinator health
- Invasive species: aquatic and terrestrial
- Farm productivity and efficiency
- Science literacy for youth
- Safe, healthy and affordable food
- Climate change adaptation
- Rural and community leadership
- Global networking
- Childhood obesity prevention

PARTNERSHIPS CREATE POSITIVE IMPACT

Federal investments, including the United States Department of Agriculture, fund multi-state research and education.

State investments are leveraged through collaborations with Minnesota state departments including agriculture, natural resources, health, human services, pollution control and tourism.

County investments ensure that 4-H and other programs are delivered locally.

Hundreds of organizations and agencies expand the reach, delivering education created by Extension across Minnesota, the nation and the world.

UNIVERSITY OF MINNESOTA EXTENSION FACULTY

- College of Food, Agricultural and Natural Resource Sciences
- College of Veterinary Medicine
- College of Education and Human Development
- Humphrey School of Public Affairs
- College of Design
- University of Minnesota – Crookston and Morris

Engaging Minnesotans to make a difference

Discover more: extension.umn.edu

65% of 800 staff work in Greater MN

35,000 volunteers

1,000,000+ participants in programs

1,000 community board members

UNIVERSITY OF MINNESOTA | EXTENSION

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10
Research and Outreach Centers

29 MAJORS
Undergraduate and Graduate studies in plants, food, energy, business, and water

75
Minnesota counties represented in the 2015-16 undergraduate population

FALL 2016 PEOPLE

2,030 Undergraduates
671 Graduates
249 Faculty
811 Staff
25,000 Alumni

677
Total bachelor's, master's and Ph.D. degrees awarded by CFANS in 2015-16 to help fill critical needs in Minnesota's agriculture, food, and natural resource workforce

MnDRIVE is a landmark partnership between the university and the state of Minnesota to align areas of university strength with the state's key and emerging industries to advance new discoveries that address grand challenges.

Through the MnDRIVE Global Food Ventures (GFV) initiative CFANS contributes to the following:

19 projects from across the U of M were awarded funding in 2014
9 projects were renewed and **6** new projects were awarded in 2015
10 graduate students were awarded MnDRIVE GFV fellowships in 2016

Through the MnDRIVE Advancing Industry, Conserving our Environment initiative CFANS contributes to the following:

7 bioremediation demonstration projects were awarded in 2015
3 post doctorate and **2** graduate fellowships were awarded for 2016-17

UNDERGRADUATE HOMETOWNS

Minnesota 60%
Wisconsin 18%
Other States 14%
International 8%

7
continents on which CFANS scientists connect Minnesota with research and business opportunities

www.cfans.umn.edu

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

CFANS DELIVERS SCIENTIFIC RESEARCH, TEACHING, AND OUTREACH TO ADVANCE MINNESOTA IN AGRICULTURE, FOOD, NATURAL RESOURCES AND THE ECONOMY

The college pursues this mission through strategic alliances with agricultural and natural resource partners at the nexus of agricultural, food and natural resource challenges facing the world.

$1 MILLION

Privately funded scholarships awarded annually to new CFANS students

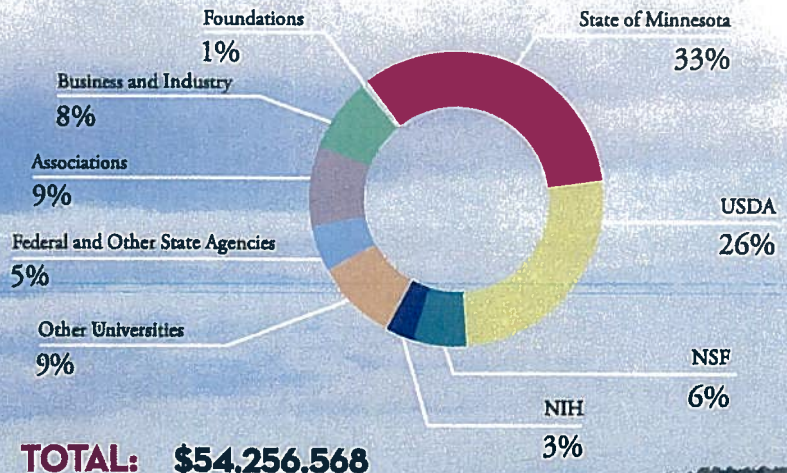
$5 MILLION

State investment in agricultural productivity to hire new scientists and technicians to work in seven key areas:

- crop and livestock productivity
- microbial science
- advancing soil fertility and water quality
- agricultural technology and decision-making
- nutrient recycling and management
- agro-ecological innovation
- technologies for managing pest resistance and climate adaptation

SPONSORED GRANT AWARDS

Sponsored Grants Received by Type



TOTAL: $54,256,568

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
- Precision agriculture
- Educating future leaders in applied science and technology for agriculture, food and natural resource sciences

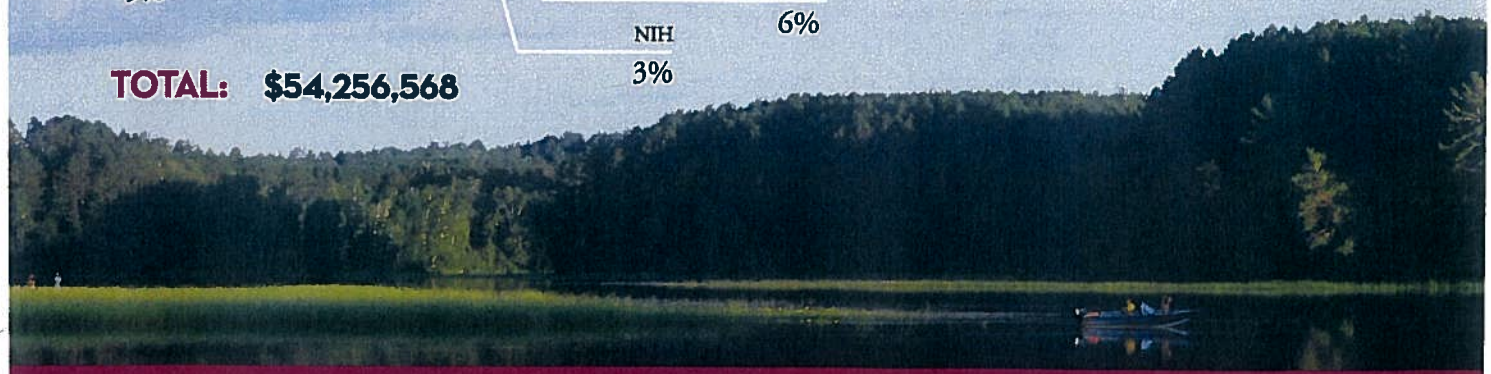
SPONSORED GRANT AWARDS

leverage **STATE** funding

$$$ adds to $

$54,256,568 Sponsored Projects

$21,993,054 State Special



www.cfans.umn.edu

College of Food, Agricultural and Natural Resource Sciences

UNIVERSITY OF MINNESOTA