

TEXAS TECH RESEARCH ENTERPRISE

NOVEMBER 2021

GOALS

- *Produce research, scholarship and creative activity that benefits West Texas, Texas and the nation.*
- *Promote interdisciplinary and collaborative partnerships among academic disciplines, colleges, institutions and industry that address practical, real-world problems, promote economic development and commercialization*
- *Strengthen our standing among Carnegie Classification “Very High Research Activity” institutions and move toward AAU status*



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AREAS OF STRENGTH & IMPACT

- **RURAL RESILIENCE & PROSPERITY**

- Water conservation, expanded broadband technology, chronic disease, addiction, entrepreneurship and economic development in rural communities, expanding crop growing zones, developing value-add applications for crops

- **ENERGY**

- Enhanced oil and gas production, produced water consortium, grid resilience, renewable energy, power electronics

- **ENVIRONMENTAL RESILIENCE**

- Severe coastal weather, severe weather in local microclimates, increasing crop viability in challenging weather conditions

- **ECONOMIC DEVELOPMENT & INNOVATION**

- Innovation HUB (ideation, innovation and commercialization programs), TTRP strategy for build-out of innovation district (focus on energy, healthcare and agriculture)



NEW DIRECTIONS IN PLANT & SOIL SCIENCE

Studying genomics and interactions among plant nutrition, microbiomes, and human nutrition to design plans to live in unique, remote environments.

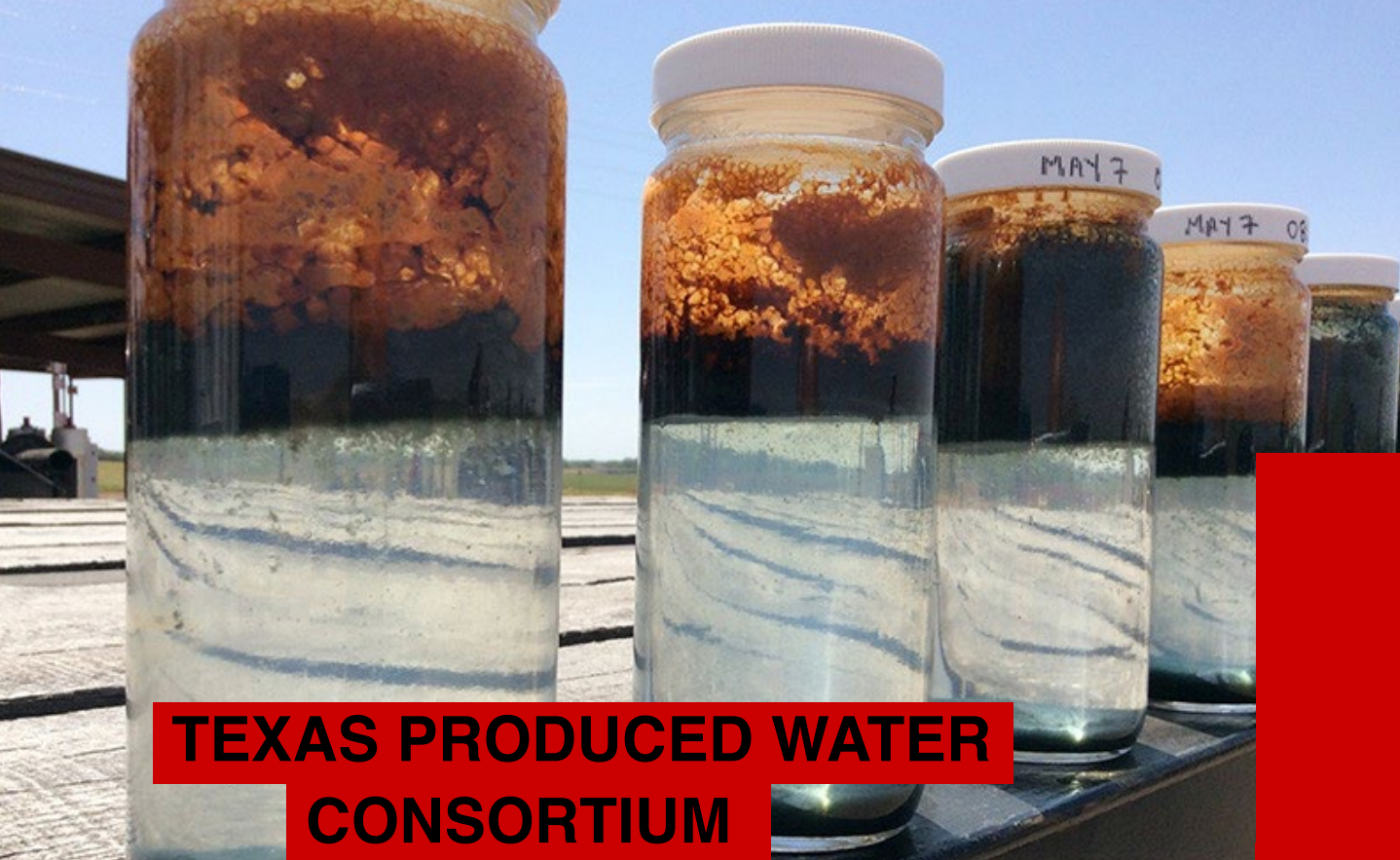


ATMOSPHERIC SCIENCE

Observing, tracking and predicting weather through the West Texas Mesonet, National Wind Institute and Hurricane Research Team to understand storm dynamics and wind power.



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TEXAS PRODUCED WATER CONSORTIUM

A state partnership to study and develop beneficial uses of produced water and suggest changes to law and administrative policy.



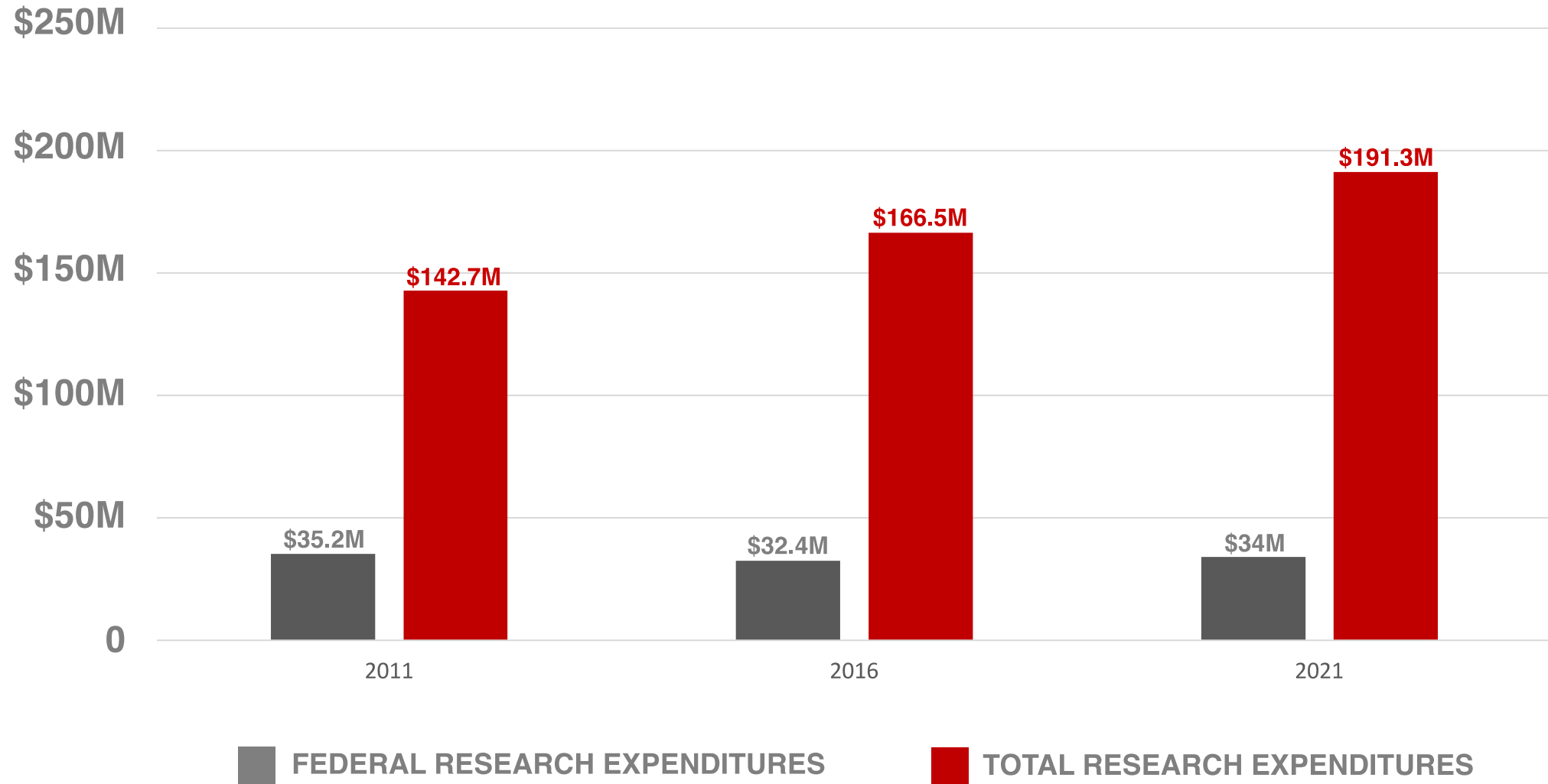
FOOD SAFETY

Securing the global food supply through access, availability, stability and utilization.

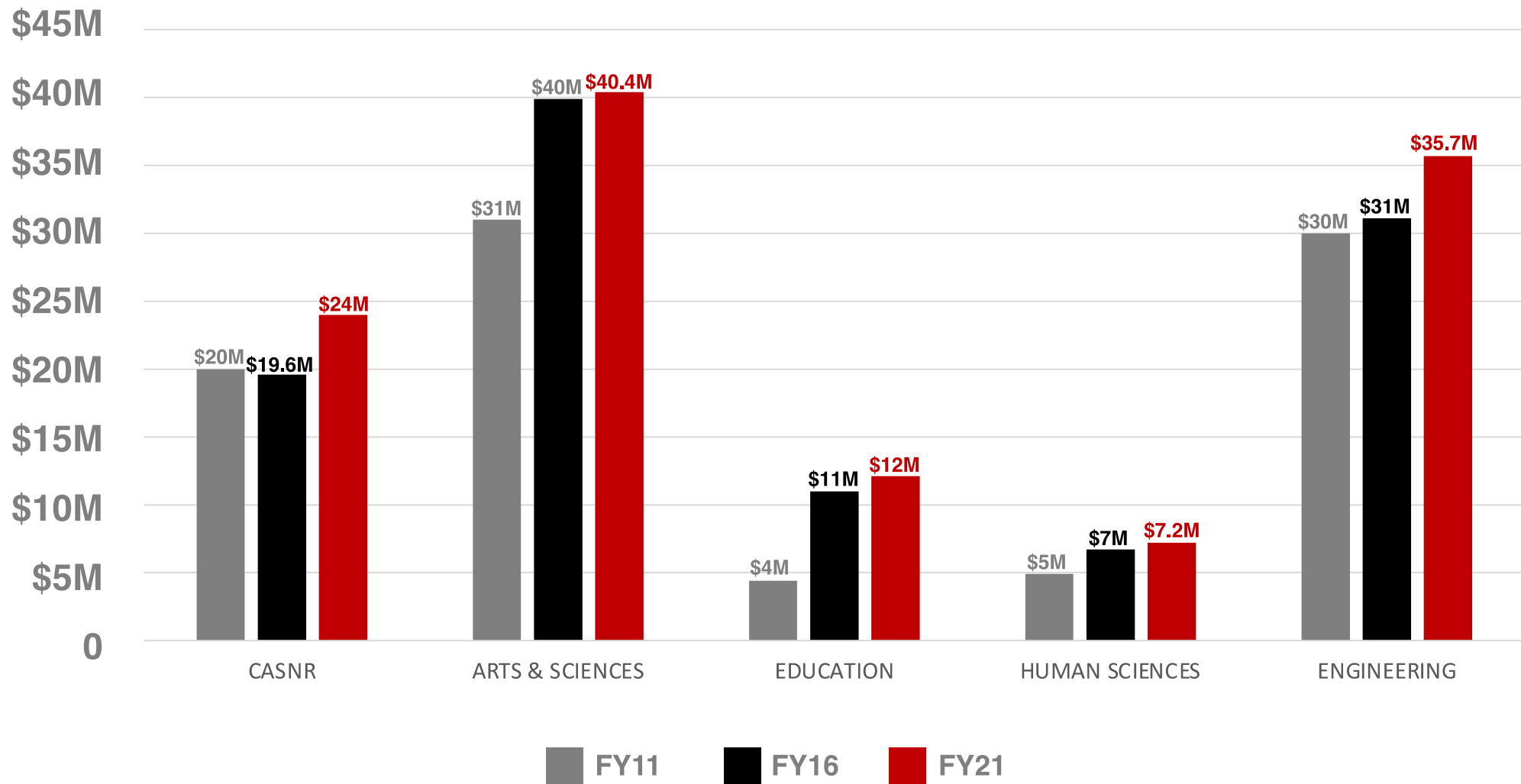


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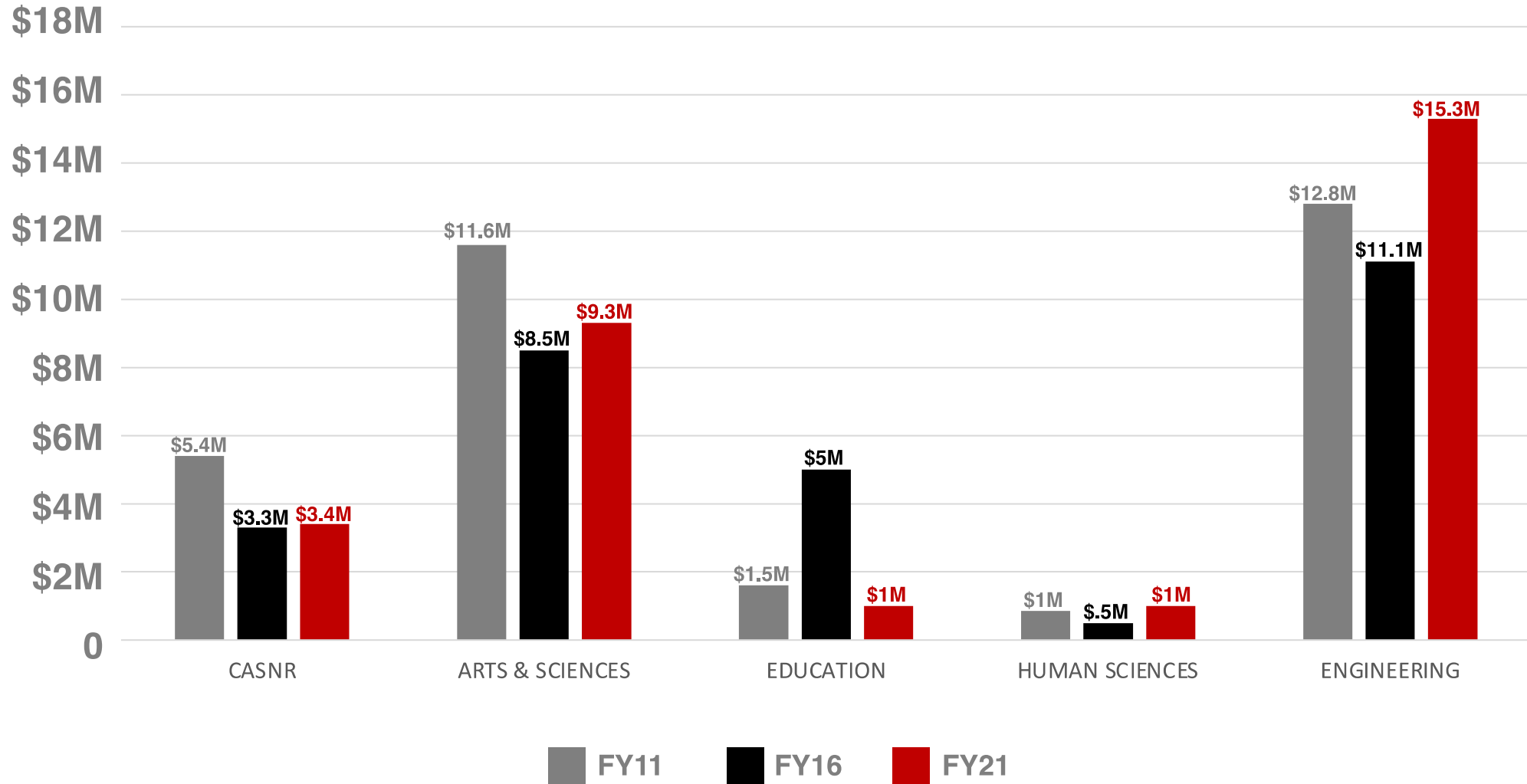
TOTAL UNIVERSITY RESEARCH



TRE BY COLLEGE



FRE BY COLLEGE



ASSESSMENT OF PROGRESS

Global University Rankings:

- **US NEWS BEST GLOBAL UNIVERSITIES: #464 OF 1,750**
- **CENTER FOR WORLD UNIVERSITY RANKINGS: #423 OF 19,788**

NSF HERD:

	<i>RANK</i>	<i>PERCENTILE</i>
TOTAL RESEARCH EXPENDITURES	113/902	13%
FEDERAL RESEARCH EXPENDITURES	178/998	18%
NATIONAL ACADEMY MEMBERS	58/431	14%

CMUP (rank top 200):

	<i>OVERALL</i>	<i>PUBLIC</i>
TOTAL RESEARCH EXPENDITURES	134	90
FEDERAL RESEARCH EXPENDITURES	199	145
NATIONAL ACADEMY MEMBERS	107	65
FACULTY AWARDS	97	66
DOCTORATES AWARDED	62	46

FEDERAL AGENCY RESEARCH FUNDING

<i>AGENCY</i>	<i>TEXAS TECH</i>	<i>U.S.</i>
HEALTH & HUMAN SERVICES	\$12.4M	\$24.4B
DEPARTMENT OF DEFENSE	\$5.8M	\$6.7B
NATIONAL SCIENCE FOUNDATION	\$9.1M	\$5.3B
DEPARTMENT OF ENERGY	\$5.3M	\$1.9B
NASA	\$4.5M	\$1.6B
USDA	\$5M	\$1.2B
ALL OTHER AGENCIES	\$9.1M	\$3.3B
ALL OTHER FUNDING SOURCES	\$33.3M	
TOTAL	\$84.5M	



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MOVING FORWARD

- **ALIGNING OUR STRENGTHS WITH FUNDING OPPORTUNITIES**

- **STRATEGIC HIRING**

- Provost and Vice President for Research coordinating with Deans on institutional enhancement investments in strategic areas
- Hires will focus on highly productive mid-career faculty, balancing with high-potential early career faculty
- Striving for both short and long-term impact, continuity in productive faculty for 15-25 years
- Early proposals are focusing on plant genomics (resiliency) and fiber/bio polymers
- Additional areas of focus expected to be focused on water, health and AI



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INNOVATION HUB

- **INNOVATION HUB IS THE PLACE TO ENGAGE STUDENTS, FACULTY AND THE COMMUNITY IN INNOVATION**
- **AREAS OF FOCUS: AGRICULTURE, HEALTHCARE & ENERGY**
- **6 NSF I-CORPS FUNDED STARTUPS IN 2021 (\$50,000/TEAM), TIED WITH BERKELEY FOR THE MOST OF ANY UNIVERSITY**

Since 2017:

- **\$54.1M IN STARTUP INVESTMENT RAISED BY 24 VENTURES**
- **\$23.6M IN FEDERAL & INTERNAL GRANTS AWARDED TO STARTUPS**
- **\$4.6M IN LICENSE REVENUE ON 105 LICENSE AGREEMENTS**
- **609 INVENTION DISCLOSURES, 210 PROVISIONAL PATENT APPLICATIONS, 85 PATENTS ISSUED**

TEXAS TECH RESEARCH PARK, INC.

- **STRATEGIC PLAN, DEVELOPED WITH HR&A, ADOPTED BY BOARD OF DIRECTORS IN SEPTEMBER 2021**
- **PARTNERING TO GUIDE REAL ESTATE DEVELOPMENT AND ENHANCE RESEARCH PARTNERSHIPS**

Two-Year Milestones:

BUSINESS MILESTONES

Finalize organizational structure and budget

Adopt ground lease template

Develop outreach and marketing strategy

PROGRAM MILESTONES

Develop and execute community and local business engagement

Develop tenant strategies

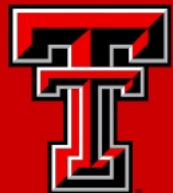
INFRASTRUCTURE MILESTONES

Finalize site plan and infrastructure

RFP for developers



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