#### **College of Agricultural, Consumer and Environmental Sciences**

New Mexico State University aces.nmsu.edu



#### New Mexico Cooperative Extension Service

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The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.

#### **CES Quick Facts**

- No budget increase- level funding request of \$12,791,600
- Function of Land Grant University
- Unique federal, state, and county partnership enabled by the Smith-Lever Act of 1914 and constitutionally mandated in New Mexico in 1915
- Offices in all 33 Counties
- Work with local needs and issues



# What Are The Three Functions of Land-Grant Universities?

• Education

Established by the Morrill Acts of 1862, 1890, and 1994

• Research

Established by the Hatch Act of 1887

• Extension

Established by the Smith-Lever Act of 1914



#### Smith-Lever Act

• A United States federal law that established a system of cooperative extension services, connected to the land-grant universities, in order to inform people about current developments in agriculture, Home Economics (FCS), and rural energy.



#### The Extension Mission

- Changes in American society have broadened the mission to more than rural people
- Provide practical, research-based knowledge and programs to improve their quality of life



#### **Program Areas**

- Agriculture
- Family and Consumer Sciences
- 4-H Youth Development
- Community Development



## Agriculture



- Includes programming in the production, processing, marketing, and consumption of food and fiber.
- The main goal is to help producers earn a fair return on their efforts in an environmentally and socially responsible manner.
- This benefits society by promoting a stable and affordable supply of food and fiber.



## Major Agriculture Programs

- Livestock production, health, and marketing
- Crop production and marketing
- Horticulture
- Ornamental horticulture
- Agribusiness
- Agricultural policy





## Major Agriculture Programs – cont.

- Natural resources
- Forestry
- Range management
- Wildlife management
- Water conservation
- Water quality
- Soils





#### **Agriculture Impacts**

- CES created the ACES High certified calf program which acts as a third party verification of vaccination and weaning programs. Nearly 1000 calves were initially enrolled in the program and 468 calves participated in the NMSU ACES High + certified sale. Collectively, participation in the program generated nearly <u>\$34,700 in additional revenue</u> for ACES High + calves compared with calves that had no verification of vaccination or weaning program
- The use of Integrated Pest Management (IPM) strategies is integral to environmentally sustainable pest suppression, reducing pesticide use and increasing conservation of beneficial insects. The CES lead IPM program has provided to over <u>10,000 growers, land managers and homeowners education on the principles of IPM</u> and habitat management for beneficial insects.



### Agriculture Impacts Cont.

- <u>Increased per farm</u> income by <u>\$4,000.00</u> per year for participants in the Beginning Farmer & Rancher initiative, where the participants used new methodologies to improve crop yields.
- New Mexico produces over 1.2 million tons of hay on over 300,000 acres, and 2.4 million tons of silage on approximately 100,000 acres. Value of these combined forage industries is greater than \$365M/year. <u>CES programs teach selecting proper crop variety, fertilizer and seed inputs, and improved water management strategies.</u> These improvements can result in as much as <u>\$100/acre savings</u> to forage producers, with an overall potential impact exceeding \$35M in the state of NM.



## Family and Consumer Sciences

- Educational programs for families and consumers
- Primary goal is to provide research-based education to strengthen the well-being of families and individuals which includes:
  - Physical
  - social
  - and emotional factors



#### Family and Consumer Sciences

Major programs fall into three generally recognized categories:

- Food and Nutrition-health, wellness, food preparation and safety
- Family resource management-food, clothing, housing, money management, consumer education
- Human development-children, parenting skills, elderly issues







- CES has partnered with the NM Department of Health Diabetes Prevention and Control Program and 21 other organizations to provide 29 Kitchen Creations cooking schools. Participants learned how to <u>plan meals/snacks</u> that <u>manage</u> <u>carbohydrates and promote heart health</u>. 470 adults have participated in the cooking schools with <u>100% reported that they understand the strategies to plan</u> <u>and prepare healthy meals</u>.
- CES's Debt Elimination Program advised 335 individuals manage their personal finances to reduce debt, with positive outcomes. <u>All participants reported</u> <u>learned strategies and tools to help get them out of debt and planned to create a</u> <u>debt-elimination plan</u>.



#### FCS Impacts Cont.

- <u>CES Health & Family Well-Being reached more than 130,000 families annually</u> <u>statewide</u> – providing classes, face-to-face nutrition education, coaching on healthy lifestyles and a range of development initiatives such as community gardens and healthy food in schools.
- CES is using community workshops through the Chronic Disease Self-Management Program (CDSMP) to "train the trainers." community workshops. In New Mexico, CES graduated 125 participants in the CDSMP. <u>Nationally, the CDSMP has shown a \$714 per person savings in emergency</u> <u>room visits and hospital utilization.</u>





- Most widely recognized extension program area in the US
- A voluntary educational program for youth that supplements formal school education
- Youth learn by doing and by becoming self- directing with parents and volunteers to guide and evaluate their progress
- All youth between age 5 and 19 are potential participants



## 4-H Youth Development – cont.

Delivery methods include:

- clubs
- short-term special interest programs
- camps
- and programs before, during, and afterschool.





# **4-H Youth Development Goals**

Life skills build character and citizenship and include:

- decision-making
- leadership
- citizenship
- self-esteem
- coping with change
- and learning how to learn





#### **4-H Impacts**



- New Mexico 4-H Youth Program <u>reaches more than 45,000</u> New Mexico youth. 4-H youth are <u>2.5 times more likely to</u> <u>engage in civic involvement</u>, 4-H youth are <u>4.9 times more</u> <u>likely to graduate from college.</u>
- 4-H School Enrichment programs provide experiential learning opportunities for 3<sup>rd</sup> grade students using the Egg to Chick curriculum in 13 counties with 3,466 youth participating. Teachers report that <u>students increased their</u> <u>scientific inquiry skills, utilized math skills and were more</u> <u>comfortable with scientific concepts.</u>



#### 4-H Impacts Cont.

- > 12,000 gained knowledge and skills related to STEM including biology, computers and electronics
- 9,000 youth participate in leadership and citizenship programs
- > 16,000 gained knowledge and skills related to healthy lifestyle choices including fitness, nutrition, safety and substance abuse prevention
- The first in-school 4-H club in Albuquerque was established in 2016. Today, it has grown to eight schools including a middle school and two high schools. Numerous 4-H curriculums and supplies are used. Through participation in the school 4-H club, the school has seen an <u>increase in attendance, a decrease in behavioral issues, and an increase in the school's overall school grade.</u>



## **Community Development**

- Is different than other program areas
  - Not mentioned in Smith-Lever Act
  - Not as likely to have full-time extension agent at local level
  - Much smaller in terms of staffing and funding
- It is process rather than content oriented
- Declared by US Department of Agriculture to be as important as other program areas.
- Work in other program areas is often considered to be community development.



#### Community Development – cont.

Four main components include:

- Leadership helps people become more effective in their community settings
- Public-policy typically emphasizes scientifically developed information and use of logic and data in analyzing alternatives
- Economic development is centered on jobs, businesses, and industry. Training for community members to help them prepare for, recruit, and retain businesses
- Community services educational content may include financial and personnel management and decision-making techniques for government, the arts, health care, housing, and recreational organizations.



#### **Community Development Impacts**

- CES lead Stronger Economies Together (SET) multicounty regions encompass all of the state's 33 counties. Through SET, over 600 of New Mexicans, leaders and community members, representing various sectors- business/industry; economic development; government; education; healthcare; faith-based; non-profit; and residents are engaged in exploring and designing together the economic development future of their communities and region.
- CES's "NM EDGE" program focusing on the education and training of public and elected officials – held 275 classes in FY18 working with 5,306 elected and appointed officials. <u>90% of County Managers surveyed found the trainings highly</u> <u>beneficial for elected officials and county staff.</u>



#### CD Impacts Cont.

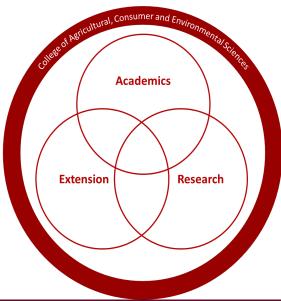
 Over the past four years, <u>109 Zuni high school seniors have completed business</u> <u>plans</u> as part of the CES Zuni High School Entrepreneurship Training and Business Development program. The training includes 30 hours of classroom instruction and a 35-hour field-based practicum. As part of the training, students research the feasibility of a business idea of their choice, and producing a business plan. The Zuni Main Street Program and tribal officials have plans to establish a business incubator and revolving loan fund to support the more promising student business ideas.



#### Project Background



- Independent analysis performed by TEConomy Partners who have performed impact analysis for multiple Land-grant universities, colleges of agriculture and the USDA.
- Evaluation of the impacts of academics, research and extension at ACES.





#### Case Studies in ACES Impacts – Examples of Healthcare and Youth Programs

Two program areas with potential to save the state \$41.7 million annually.

#### REDUCING THE COST OF HEALTHCARE IN NEW MEXICO

The work of NMSU Extension in assisting people with the management of chronic diseases, prevention of obesity and poornutrition related effects on health, helping to improve physical activity levels, and other related work reaches tens of thousands of participants across the state each year.

To illustrate the potential impact of healthcare improvement, input/output analysis is used to model the economic effect on New Mexico of a reduction in several diseases and health disorders associated with poor diet and exercise. The scenario modeled estimates the impact of a 1 percent decrease in the total number of hospital inpatient visits for 25 selected conditions related to diet and exercise and derives a dollar savings estimated from data on the mean cost of visits.

Based on the analysis, it is found that a 1 percent decrease in hospital inpatient stays in New Mexico (for diseases that are associated with poor diet and/or lack of exercise) would result in \$3.3 million in cost savings in the state.

#### **REDUCING THE COST OF NEGATIVE YOUTH BEHAVIORS**

Extension's work with youth seeks to build confident, self-reliant, personally responsive youth with leadership skills and engagement in their community. Imparting these skills and positive behavioral traits in youth improves their engagement in school and reduces the propensity of participating youth to engage in negative, antisocial or delinquent behaviors. The potential impacts of reducing negative behaviors can be significant:

- The NM juvenile justice system was engaged with 221,944 juveniles across the state in 2015. Just the cost of operating juvenile lock-up facilities costs the state \$35.7 million. Were youth participation in 4-H programs to reduce the juvenile criminal justice population in NM by just one percent, the saving to the state would total \$357,000 annually.
- The CDC Youth Behavior Survey for 2015 found New Mexico to have among the highest rates of admitted drug abuse among high school students. The CDC estimates the US cost of drug abuse to be over \$600 billion annually. A conservative estimate of drug abuse costs in NM would be \$3.8 billion annually – but it is probably considerably more given the higher propensity for drug abuse in the state evidenced by the high school statistics. Were 4-H participation to reduce drug-abuse in New Mexico by just one percent, the benefit to the state would be \$38 million annually.



#### **Expenditure Impact Findings**

- Together, ACES Academic Programs, the Experiment Station, and Extension had FY2016/17 expenditures totaling \$70.6 million and employed 741.6 full-time equivalent (FTE) personnel. This generated a total expenditure impact (output) in New Mexico of \$132.3 million, and supported 1,204 jobs with a labor income of \$65.36 million.
- NMSU Cooperative Extension expenditures are responsible for 451 jobs and \$49.9 million of the economic output

https://aces.nmsu.edu/economicimpact/documents/teconomyimpact-report-for-nmsu-aces---final-reportr2.pdf

