ARS focuses on solutions to agricultural challenges affecting Americans every day. Each dollar invested in agricultural research results in $17 worth of economic impact.

ARS = SCIENCE-BASED SOLUTIONS
$1.286 billion requested

Improve the competitiveness and sustainability of U.S. agriculture. Maintain the capacity and readiness to respond to emerging problems.

Increased funding will ensure the ARS can respond to pests and diseases, drought, food safety issues, environmental concerns and make progress towards solving problems facing America’s crop, livestock, dairy, poultry and forage producers.
Current research involves biotechnology, including molecular biology; genetic engineering; and bioinformatics; application of artificial intelligence to computer technology; innovative approaches to pest control through insect neurochemistry and the use of pheromones.

ARS research is critical to anticipating and addressing challenges faced by producers of both commodity and specialty crops using big data to improve animal and crop genetics and management. ARS investment in research on antimicrobial resistance, avian influenza which has reemerged in 2017\(^1\), and foreign and domestic animal diseases, animal and plant production efficiency, as well as improving waste and water management and use efficiency must continue.

The Friends of ARS urges the Committee to tackle ARS infrastructure by investing in the next highest priority facilities identified in the Capital Investment Strategy to support ARS facilities\(^{ii}\).

As the Committee works on ag appropriations for fiscal year 2018, the Friends of ARS urges you to provide no less than $1.286 billion for salaries and expenses and $99.6 million for buildings and facilities.

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<th>Final FY16</th>
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<td>$1.143 billion</td>
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ARS plays a critical role in partnering with universities and industry to advance science and address emerging issues. These partnerships are strengthened through ARS support of research at these institutions.

ARS investment will advance our understanding of the microbiome, soil health, pollinator health, economic and environmental sustainability, how to leverage big data and digital technologies to transform agriculture, and how to improve animal health and welfare, animal production, as well as human health, and nutrition.

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\(^1\)During a seven month span beginning in Dec. 2014 in the Pacific Northwest, a highly pathogenic avian influenza (HPAI) outbreak spread across 21 states, affected 211 commercial and 21 backyard poultry flocks and resulted in the depopulation of 7.5 million turkeys and 42.1 million egg-layer and broiler chickens. The outbreak cost over $1 billion, not including downtime losses faced by producers. There are currently 4 commercially available vaccines for AI licensed in the U.S. but there are several problems associated with their use. They are primarily in injectable form which makes their utilization in the face of a major disease outbreak labor and cost intensive. Additionally, their use must be approved by the USDA and state veterinarian because vaccination can have negative trade implications. Vaccinated animals cannot be differentiated from naturally infected animals. Importing countries view the presence of antibody as evidence of prior or active infection. Additional funding to further develop both the DIVA vaccination strategy for AI as well as continued research into the development of an effective vaccine against AI that can be administered via aerosol or water would greatly benefit the U.S. and its poultry industry.

\(^{ii}\)Capital Investment Strategy, Agricultural Research Service, USDA, April 2012.