



United States Department of Agriculture

U.S. Department of Agriculture Proposed Activities to Address Antibiotic Resistance

President's Council of Advisors on Science
and Technology (PCAST)

March 27, 2015



Overview

- Gaps identified by Stakeholders
- Goals and objectives of USDA activities to address antibiotic resistance
- Specific PCAST recommendations for USDA
- FY2016 budget



Stakeholders Recommendations to USDA in 2012 Workshop

- Holistic approach considering entire microbiome
- Strengthen National Antimicrobial Resistance Monitoring System (NARMS)
- Strengthen National Animal Health Monitoring System (NAHMS)
- Conduct research via a long-term plan
- Conduct outreach and education



USDA Goals to Address Antibiotic Resistance

- Obtain and disseminate science-based, quantitative antibiotic drug use information coupled with the development of resistance in food-producing animals and relate this to livestock management practices.
- Address recognized knowledge gaps and develop effective, practical mitigation strategies that will help to prolong the effectiveness of antibiotics to treat both people and animals.
- Identify novel strategic approaches (immunological, genetic, nutritional, etc.) that could be exploited to control/mitigate infectious disease and thus reduce the need to use traditional antibiotics.

Objectives

- Objective 1: Determine and/or model patterns, purposes, and impacts of antibiotic use in food-producing animals.
- Objective 2: Monitor antibiotic drug susceptibilities of selected bacterial organisms in food-producing animals, production environments, and meat and poultry.
- Objective 3: Identify feasible management practices, alternatives to traditional antibiotics, and other mitigations to reduce AMR associated with food-producing animals and their production environments.

Proposed Surveillance

Enhanced and expanded

- survey questionnaires
- longitudinal studies
- Measurement of antimicrobial drug use and resistance, and related production practices by livestock and poultry producers



Proposed Research

- Alternatives
- Vaccines
- Feed, nutrition, genetic resistance
- Microbial Ecology
- Management practices
- Multi-institutional/multiagency projects that integrate research, education, and extension.



Proposed Education/Outreach

Support FDA and stakeholders in education and outreach programs for various audiences including veterinarians, producers, extension agents, academia, the media and the lay public.



Specific PCAST Recommendations

- PCAST Recommendation 3 (Fundamental Research #2)
 - Comprehensive research strategy through \$25M multidisciplinary Innovation Institute
 - Institute not funded (FY15)
 - USDA's National Institute of Food and Agriculture proposes to solicit applications through its competitive funding process to address the proposed AMR initiative in the FY2016 budget request
- PCAST Recommendation 7 (Limiting the Use of Antibiotics in Animal Agriculture) #2 stewardship education/outreach
 - USDA's National Institute of Food and Agriculture proposes to support research, education, and outreach efforts through its competitive peer review process to address the proposed AMR initiative in the FY2016 budget request

FY2016 Budget

- From a base of \$20M in 2015, the FY2016 budget proposes \$77M
 - Increase USDA funding for antimicrobial resistance by \$57M
 - \$65 M for research
 - \$12 M for surveillance



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Details can be found in:

USDA AMR Workshop:

<http://www.fsis.usda.gov/wps/wcm/connect/9ddc0b9c-af04-4ed4-b959-b7799ddbfe11/USDA-Antibiotic-Resistance-Workshop-Summary.pdf?MOD=AJPERES>

USDA AMR Action Plan:

www.usda.gov/antimicrobial.html

USDA 2016 Budget Explanatory Notes

http://www.obpa.usda.gov/fy16explan_notes.htm

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