

## USDA research is working for Pennsylvania

### **Supporting innovation**

In FY 2015, Pennsylvania received **\$6.1 million in new grants** from the Agriculture and Food Research Initiative (AFRI).

Researchers at **Pennsylvania State University** are using AFRI funding to study how  $N_2O$  is distributed along surface and deep soil layers to improve our ability to predict fluxes of  $N_2O$  into the atmosphere.

AFRI funding is being used to study how legume cover crops increase soil organic matter, decrease erosion and reduce nutrient losses.

### **Supporting small business**

From 2006-2015, Pennsylvania small businesses received more than \$5.5 million in grants through the Small Business Innovation Research program within USDA

In Malvern, **BioChemInsights, Inc.** is using an SBIR grant to optimize a novel process for producing bio-butanol that can significantly increase the yield of bio-butanol from cellulosic raw materials.

# Agronomy





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### **Economic Impact**



In 2014, agriculture and related industries added **\$985 billion** to the U.S. gross domestic product (GDP).



Agriculture exports hit a record high of **\$150 billion**, or 9% of total U.S. exports, in 2014.



In 2014, 17.3 million full- and part-time jobs were related to agriculture – **about** 9.3% of total U.S. employment.



U.S. public investments in agriculture research and development produce benefit-cost ratios of 20:1 and higher

#### **Pennsylvania Agriculture**

58,800 farms

\$7.4 billion in commodities

\$2 billion in agricultural exports

143,225 jobs