Plenary Panel

Innovation as a Solution for Farmers
Innovators

Veterinarians

Agronomists

Conservationists

Financiers

Risk Takers

Economists

Engineers

Meteorologist

Veterinarians
Agriculture’s Role in The Climate Conversation

### Economic Sector
- Agriculture: 9.0%
- Industry: 22.4%
- Electricity Generation: 27.5%
- Transportation: 28.7%
- Residential: 5.2%
- U.S. Territories: 0.7%
- Commercial: 6.5%

### IPCC Sector
- Agriculture: 8.4%
- Industrial Processes: 5.5%
- Waste: 2.0%
- Energy: 84.1%

*U.S. Inventory of Greenhouse Gas Emissions and Sinks, 2017*

Source: Environmental Protection Agency, Farm Bureau Calculations
Animal Agriculture’s Role in U.S. Greenhouse Gas Emissions is Less than 3%

U.S. Livestock Emissions as a Percent of Total GHG Emissions, Based on IPCC Sector, 1990 to 2017 in CO₂ Equivalents

- **Beef Cattle** emissions represented 1.95% of total GHG emissions in 2017.
- **Dairy Cattle** emissions represented 0.67% of total GHG emissions in 2017.
- **Swine** emissions represented 0.04% of total GHG emissions in 2017.

Source: Environmental Protection Agency, Farm Bureau Calculations
Index of Methane Emissions Per Unit of Production for Beef, Dairy and Swine, 1990 = 100

- **Dairy**
  - Emissions per unit of milk production have declined by nearly 25% since 1990.

- **Beef**
  - Emissions per unit of beef production have declined by more than 7% since 1990, and was more than 10% lower in recent years.

- **Swine**
  - Emissions per unit of pork production have declined by more than 19% since 1990.

Source: Environmental Protection Agency, USDA FAS PSD Online, Farm Bureau Calculations
Farmers Today Do More With Fewer Acres

Harvested Acres Needed to Produce the 2018 Crop, 1990 and 2018

- **40 Million**
  - It requires 33% fewer acres in 2018 to produce **corn** than it would have in 1990

- **42 Million**
  - It requires 33% fewer acres in 2018 to produce **soybeans** than it would have in 1990

- **4 Million**
  - It requires 27% fewer acres in 2018 to produce **cotton** than it would have in 1990

- **8 Million**
  - It requires 17% fewer acres in 2018 to produce **wheat** than it would have in 1990

Source: USDA NASS, Farm Bureau Calculations
Panel: Innovation As A Solution for Farmers

Jeff Broin
Founder
POET

Biofuels
Climate Change

Bruce Kettler
Director
Indiana State Department of Agriculture

Rural Viability
Interdependency Across Ag

Shari Rogge-Fidler
President
Farm Foundation

Challenges in Ag
Innovation Is A Solution

Frank Yiannas
Deputy Commissioner
Food Policy and Response
FDA

Digitization of Food
Food Safety & Traceability