2011 ESCOP Survey Results on Science Roadmap Priorities
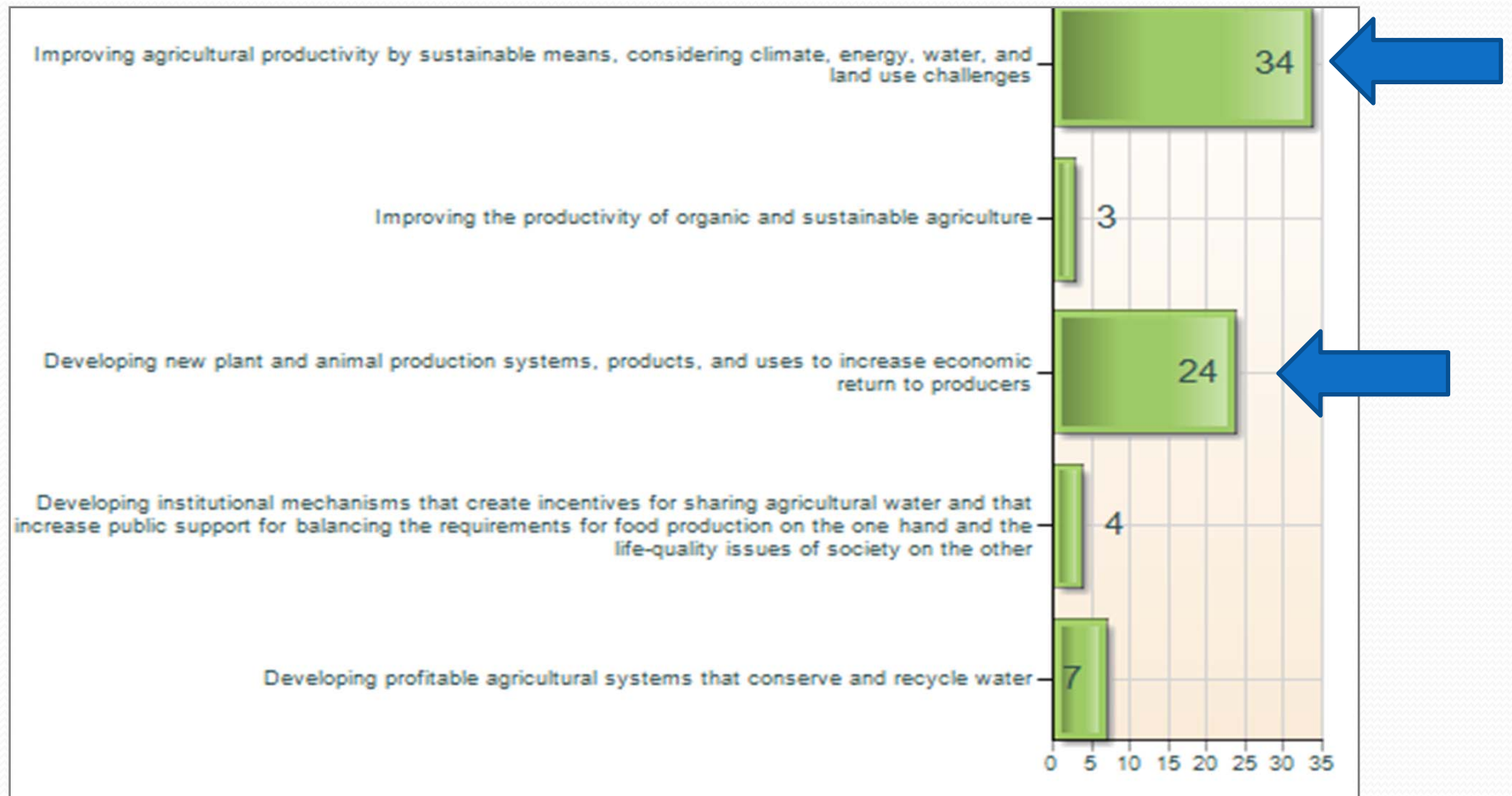
September 27, 2011

Simple Survey Process

- Each Challenge

  – Specific action items (4-5/Challenge)

- Each respondent was asked to select the top two action items within each Challenge.

- A total of 36 responses were received.

Challenge 1: We must enhance the sustainability, competitiveness, and profitability of U.S. food and agricultural systems.
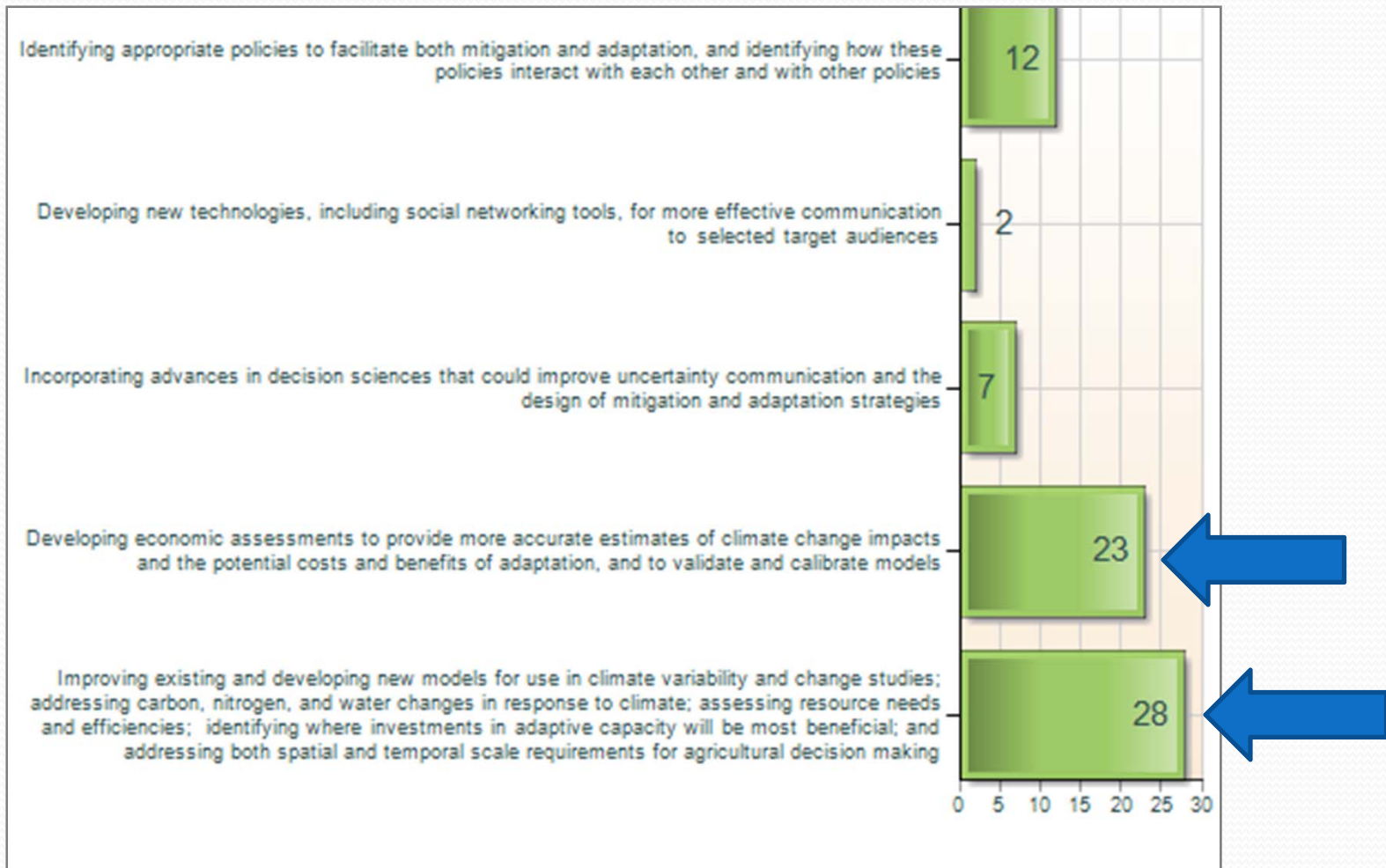
Challenge 1

1. Improving agricultural productivity by sustainable means, considering climate, energy, water, and land use challenges (34)

2. Developing new plant and animal production systems, products, and uses to increase economic return to producers (24)

Challenge 2: We must adapt to and mitigate the impacts of climate change on food, feed, fiber, and fuel systems in the United States.
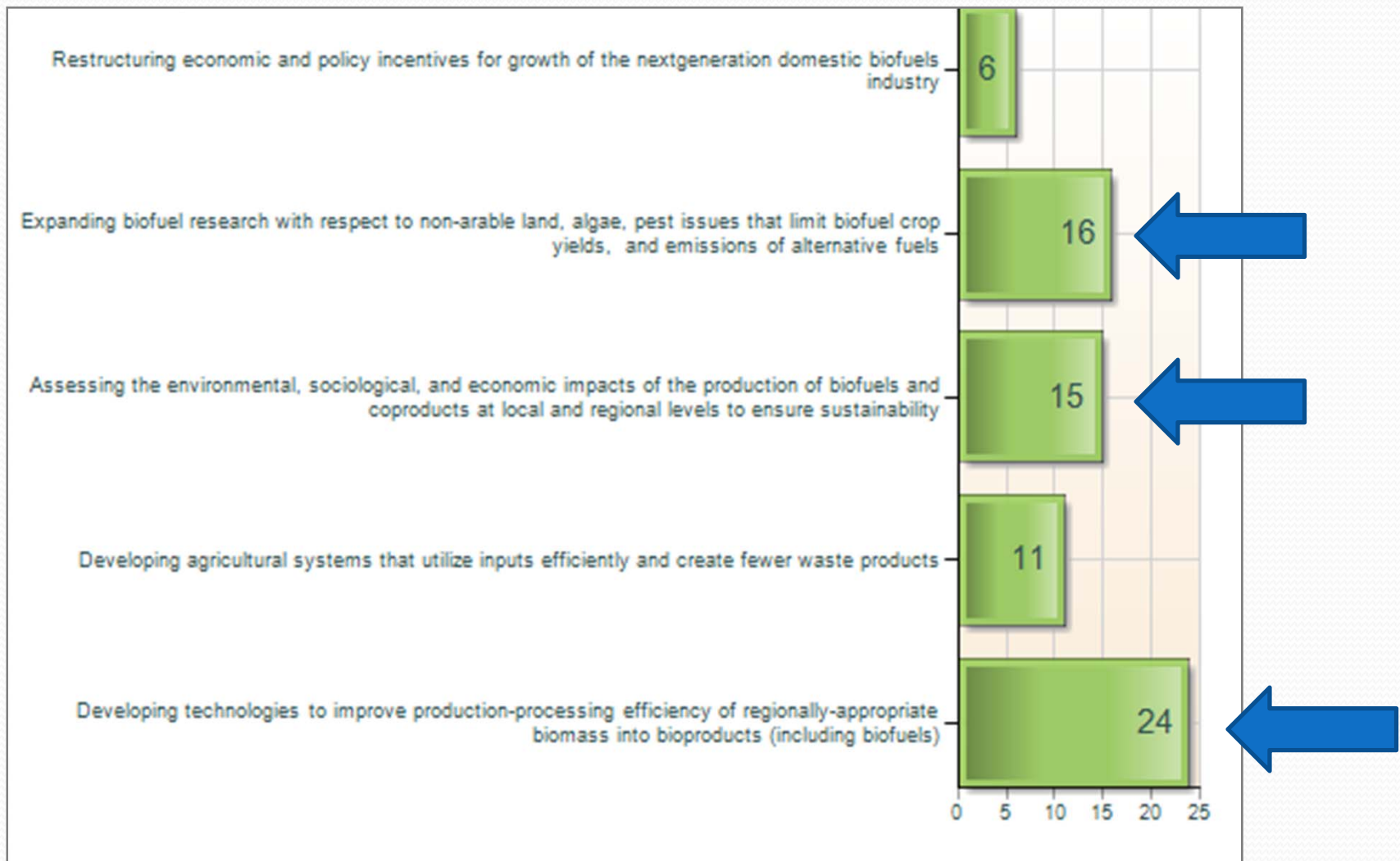
Challenge 2

1. Developing new plant and animal production systems, products, and uses to increase economic return to producers (28)

2. Developing economic assessments to provide more accurate estimates of climate change impacts and the potential costs and benefits of adaptation, and to validate and calibrate models (23)

Challenge 3: We must support energy security and the development of the bioeconomy from renewable natural resources in the United States.
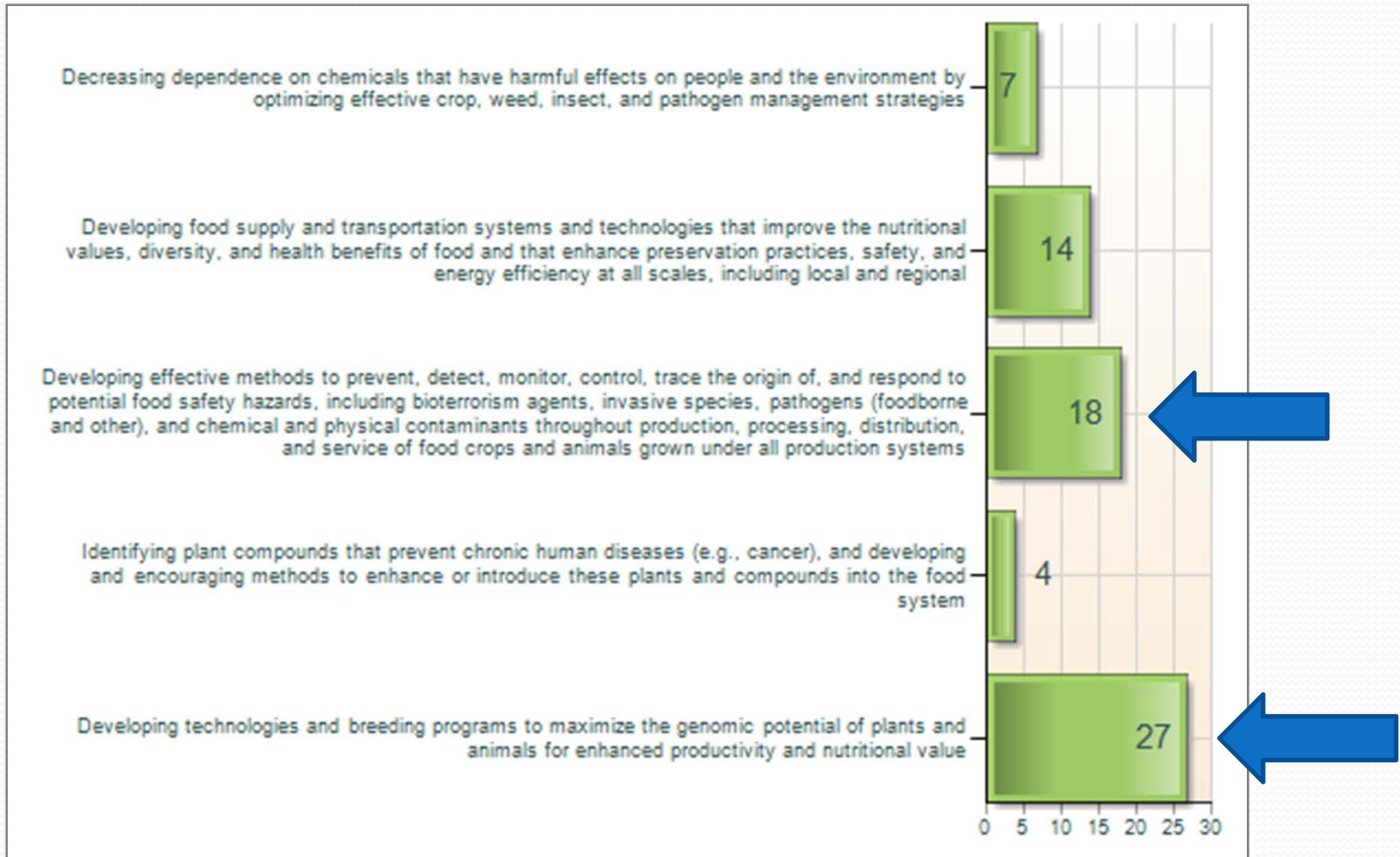
Challenge 3

1. Developing technologies to improve production-processing efficiency of regionally-appropriate biomass into bioproducts (including biofuels) (24)

2. Expanding biofuel research with respect to non-arable land, algae, pest issues that limit biofuel crop yields, and emissions of alternative fuels (16)

3. Assessing the environmental, sociological, and economic impacts of the production of biofuels and co-products at local and regional levels to ensure sustainability (15)

Challenge 4: We must play a global leadership role to ensure a safe, secure, and abundant food supply for the United States and the world.
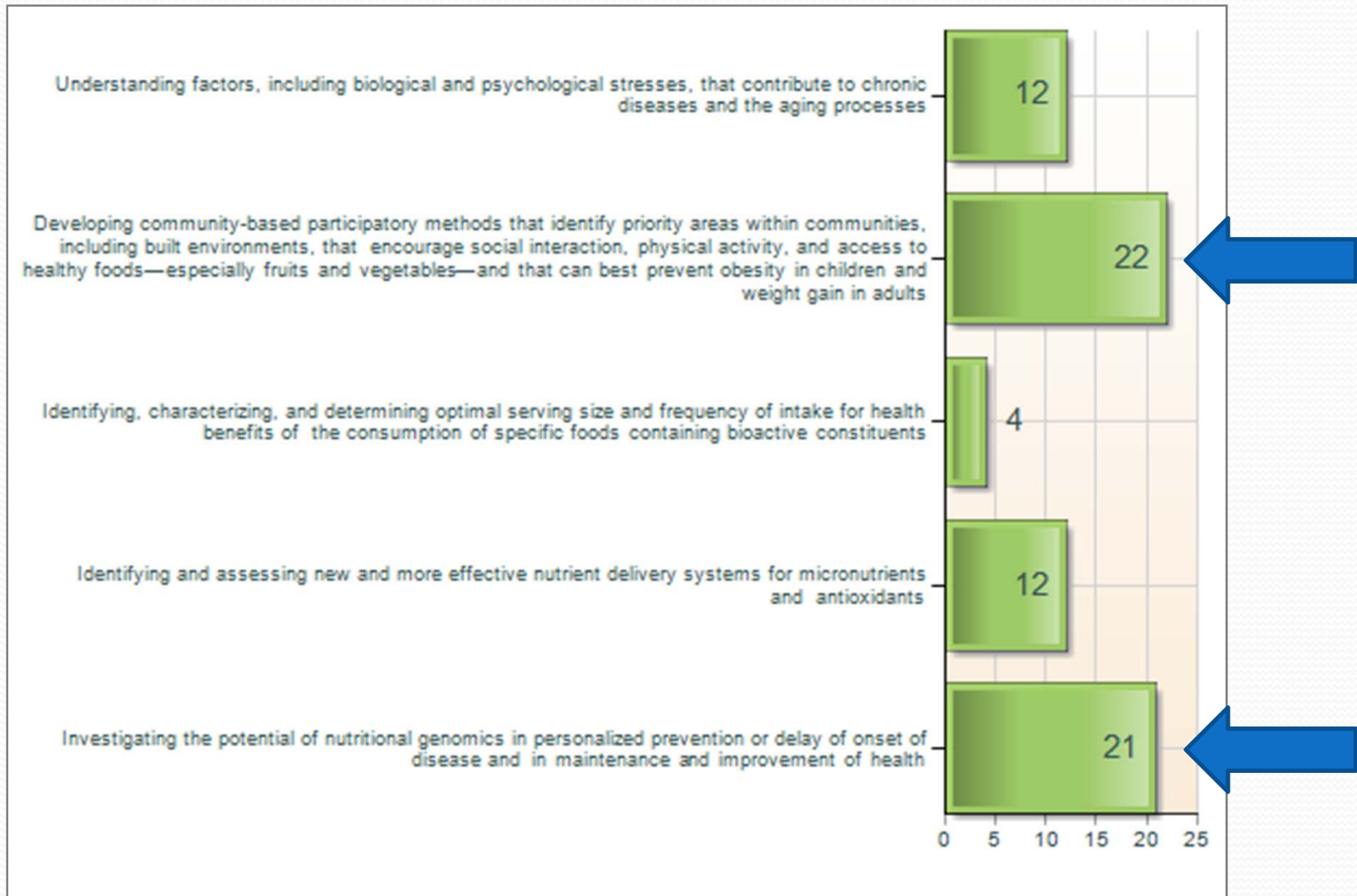
Challenge 4

1. Developing technologies and breeding programs to maximize the genomic potential of plants and animals for enhanced productivity and nutritional value (27)

2. Developing effective methods to prevent, detect, monitor, control, trace the origin of, and respond to potential food safety hazards, including bioterrorism agents, invasive species, pathogens (foodborne and other), and chemical and physical contaminants throughout production, processing, distribution, and service of food crops and animals grown under all production systems (18)

Challenge 5: We must improve human health, nutrition, and wellness of the U.S. population.
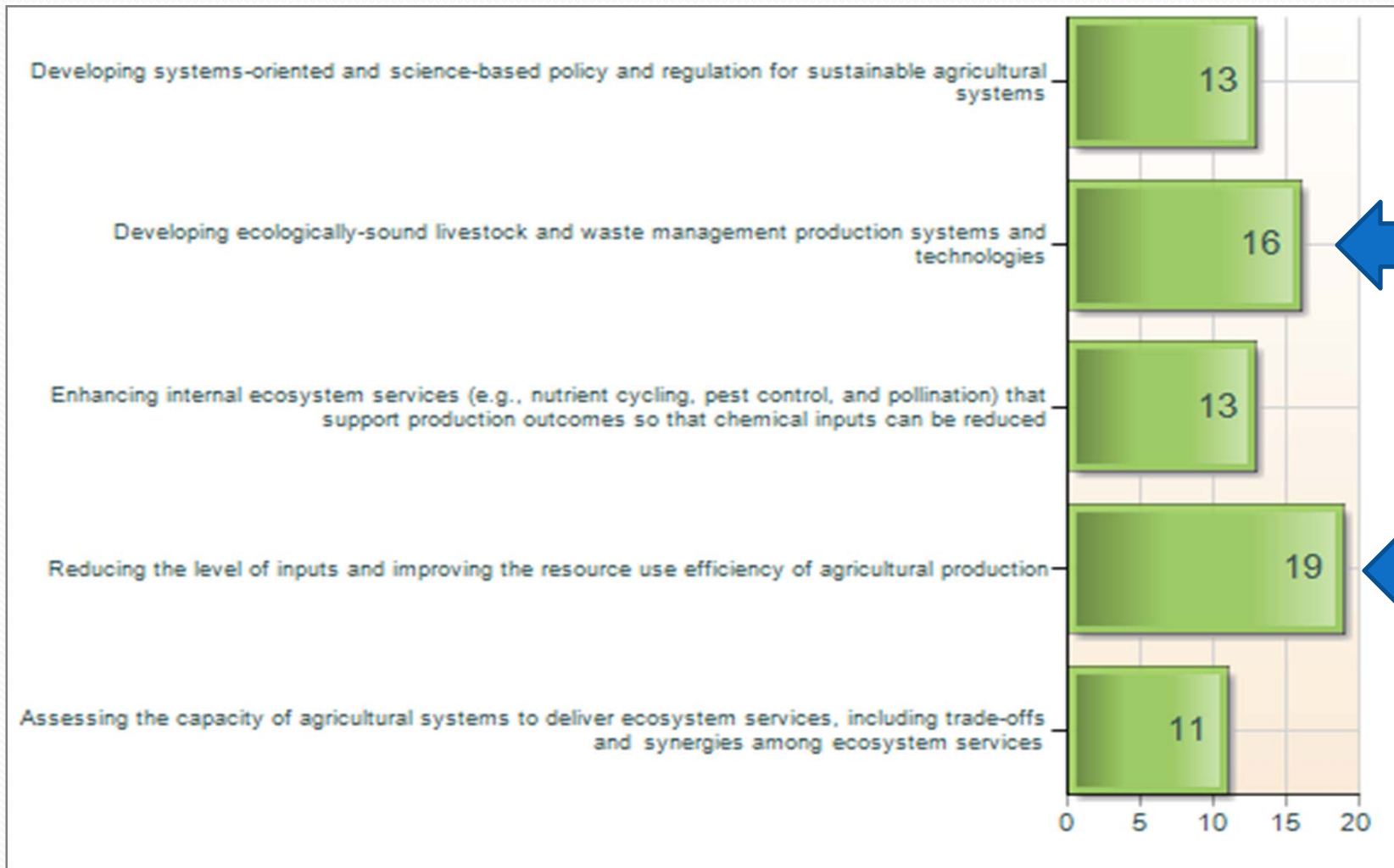
Challenge 5

1. Developing community-based participatory methods that identify priority areas within communities, including built environments, that encourage social interaction, physical activity, and access to healthy foods— especially fruits and vegetables—and that can best prevent obesity in children and weight gain in adults(22)

2. Investigating the potential of nutritional genomics in personalized prevention or delay of onset of disease and in maintenance and improvement of health (21)

Challenge 6: We must heighten environmental stewardship through the development of sustainable management practices.
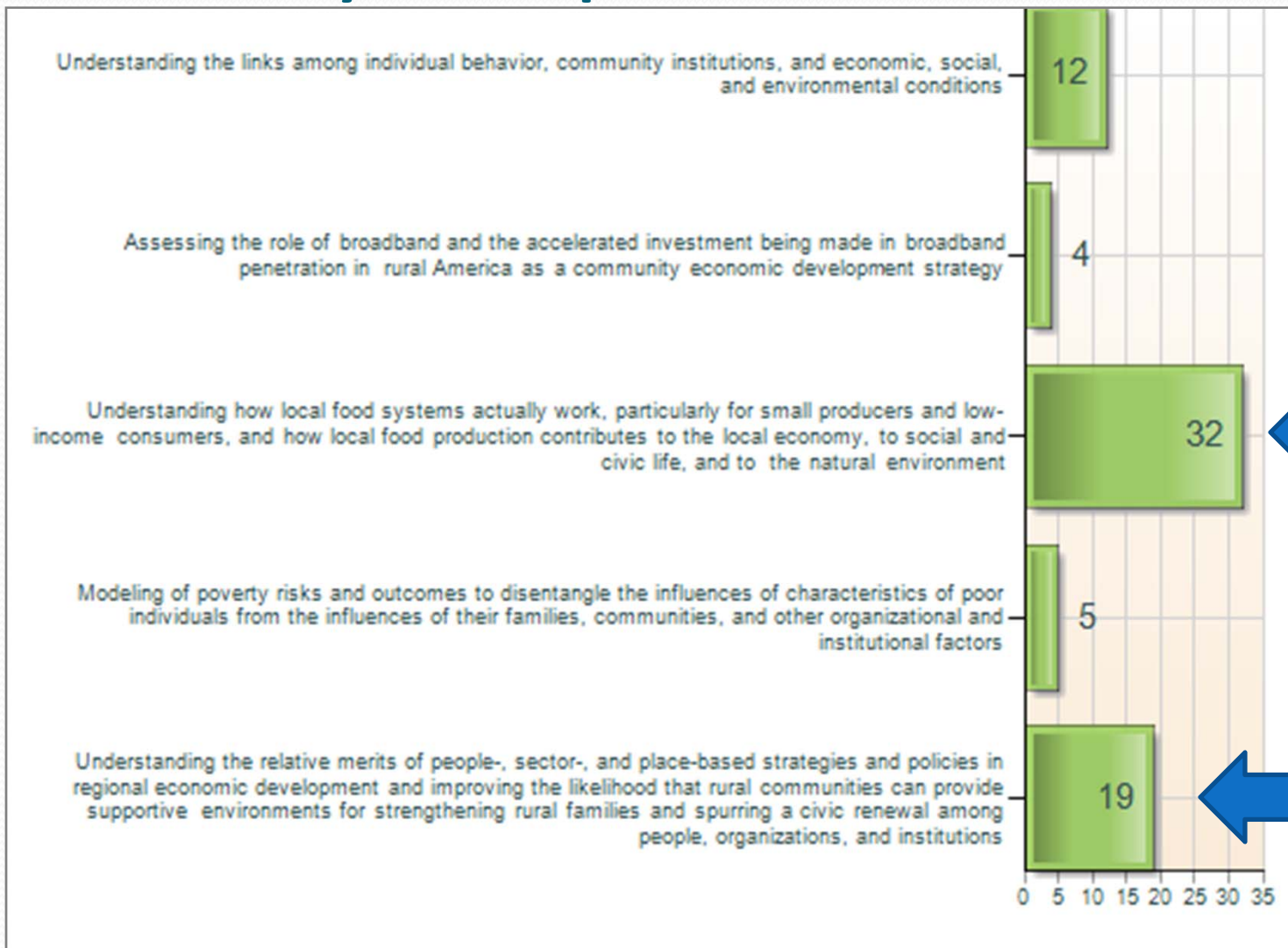
Challenge 6

1. Reducing the level of inputs and improving the resource use efficiency of agricultural production(19)
2. Developing ecologically-sound livestock and waste management production systems and technologies (16)

Challenge 7: We must strengthen individual, family, and community development and resilience.

Challenge 7

1. Understanding how local food systems actually work, particularly for small producers and low-income consumers, and how local food production contributes to the local economy, to social and civic life, and to the natural environment (32)

2. Understanding the relative merits of people-, sector-, and place-based strategies and policies in regional economic development and improving the likelihood that rural communities can provide supportive environments for strengthening rural families and spurring a civic renewal among people, organizations, and institutions (19)

Response Rate