NIFA, NCSU AND N.C. A&T COMBINED RESEARCH INITIATIVES

Color code:
NIFA - green
A&T-NCSU Partnership - purple

Global Food Security and Hunger (PLANT)	Global Food Security and Hunger (ANIMAL)	Climate Change Water and Soil Quality, Biodiversity	Sustainable Energy and Biotechnology	Childhood Obesity	Food Safety Agromedicine and Food Safety	Human and Community Development/ Business-Economic Development	Human Health, Nutrition and Well-Being
NIFA supports new science to boost U.S. agricultural production, improve global capacity to meet the growing food demand, and foster innovation in fighting hunger by addressing food security for vulnerable populations. *Plant systems research, including genetics, with beneficial implications for human wellbeing...* • *Plant production systems and health* • *Engineering solutions* • *Food product development, processing and quality* • *Economic systems*	*NIFA supports new science to boost U.S. agricultural production, improve global capacity to meet the growing food demand, and foster innovation in fighting hunger by addressing food security for vulnerable populations.* *Animal systems research, including genetics, with beneficial implications for human wellbeing...* • *Animal production systems and health* • *Engineering solutions* • *Food product development, processing and quality* • *Economic systems*	*NIFA -funded projects generate knowledge to develop an agriculture system that maintains high productivity in the face of climate changes. This will help producers to plan for and make decisions to adapt to changing environments and sustain economic vitality, and can take advantage of emerging economic opportunities offered by climate change mitigation technologies.* • *Environmental solutions for traditional, small-scale and limited resource users* • *Providing solutions to environmental issues which are practical for small-scale farms and communities with limited resources* • *Enhancing soil, water and air quality to promote wetland and wildlife habitat preservation and restoration* • *Understanding carbon footprints for agriculture, industry and community activities* • *Enhancing forested*	*NIFA contributes to the President's goal of energy independence with a portfolio of grant programs to develop biomass use for biofuels, designing optimum forestry and crops for bioenergy production, and to produce value-added bio-based industrial products.* • *Bio-fuels* • *Bio-mass* • *Bio-fuels substrates and conversions* • *Bio-energy* • *Bio-based industrial products* • *Energy conservation* • *Engineering solutions* • *Economic systems*	*NIFA -supported programs ensure that nutritious foods are affordable and available, and provide guidance so that individuals and families are able to make informed, science-based decisions about their health and well-being.*	*NIFA food safety programs work to reduce the incidence of foodborne illness and provide a safer food supply by addressing and eliminating causes of microbial resistance to contaminants, educating consumer and food safety professionals, and developing food processing technologies to improve safety.* *Promoting health and safety in communities that depend on agricultural and natural resource-based industries* • *Farm, forestry and agribusiness safety* • *Processing for food safety* • *Safe handling of foods* • *Fresh produce food safety* • *Meat and related products safety* • *Engineering solutions* • *Economic systems*	*Socioeconomic, infrastructure, and public policy analyses for fully optimizing human capital and strengthening communities* *Alternative enterprises, niche markets, innovative farm-based businesses and environmentally sustainable production systems* *Helping disadvantaged rural communities create economic growth by becoming players in the global marketplace* • *Economic systems* • *Families and communities* • *Youth development* • *Creating business opportunities* • *Understanding community processes* • *Understanding public policy processes*	*Integrated research in genetics and genomic sciences, biochemistry, toxicology, biology using a variety of organisms as models will yield responses and approaches to improve the health, nutrition and well-being of humans and their environment through improved nutrition of fruits and vegetables, reduced susceptibility to disease through nutrition and new vaccine technologies, and enhanced effectiveness of plant derived components.* *Integrated research in metabolomics, biochemistry, pharmacogenomics, breeding and postharvest management and processing* • *Human nutrition and health* • *Plants for human health* • *Vector born diseases* • *Genetics and human health* • *Disease solutions*

		and grass lands • *Natural resources and environmental protection and enhancement* • *Engineering solutions* • *Economic systems*					