

# RESEARCHERS ACROSS AMERICA ARE ADVANCING NUTRITION.

Collaborative research by land-grant universities plays an important role in advancing our understanding of human health and nutrition and improving access to and consumption of safe, high-quality, nutritious foods nationwide.

Researchers tackle nutrition issues in many ways.

**DISCOVERING** compounds that are *beneficial* to human health and understanding the role they play in preventing chronic diseases

**BREEDING** fruit and vegetable varieties with *enhanced* nutrients

**UNDERSTANDING** how marketing and policy affect nutrition

## How do these projects impact you?

They prevent **DISEASE** and promote **WELLNESS**.

They reduce **HEALTHCARE COSTS** and strain on the system.

They help communities *thrive*.

Research has informed policies and programs that improve the availability and consumption of nutritious foods in under-served communities. Research has influenced the creation of mobile food markets and pantries and influenced decisions that allowed food stamp spending at CSAs and farmers markets and allowed food banks to accept imperfect produce. In addition to providing fresh produce to more communities, these efforts reduce food waste, lower food bank operating costs, and give farmers new sales outlets.



## HEALTHY VARIETIES

Various multistate projects are breeding fruits and vegetables with enhanced nutrients. For example, scientists bred potatoes with high levels of potassium, which reduces hypertension, folate, which protects against birth defects and heart disease, antiglycemic properties that could help fight diabetes, and antioxidants that have numerous health benefits. New bean varieties with modified sugar content and higher zinc are suitable for people with certain dietary needs and restrictions.

## SALT

Studies revealed a way to reduce the particle size of salt so it transfers to taste buds more efficiently, which means less salt can be used without affecting taste (Louisiana).

## FAT

Scientists developed new tools that reduce the amount of oil foods soak up during frying, making them less fatty (Illinois & Virginia Tech)

## FOOD SAFETY

Research has led to innovative ways to enhance the safety and shelf life of fresh produce, including electron beam irradiation for sanitizing complex-shaped fresh fruits and vegetables (Texas), chemicals that delay ripening (California, Florida & Michigan), and high pressure processing that kills bacteria without additives and leaves nutrients intact (Ohio & Minnesota). Researchers also developed a method that helps nutrients in milled rice sustain washing, making milled rice more nutritious (Mississippi). Other scientists designed antimicrobial and anti-moisture packaging for pre-cut fresh produce.

## NANOTECHNOLOGY

Using nanotechnology, researchers designed tiny carriers that can deliver nutrients and antimicrobials directly into cells (Illinois, Louisiana, Maryland, Tennessee, Texas & Virginia Tech)

## PHYTONUTRIENTS

Research suggests compounds in green tea could help regulate bad cholesterol, fight inflammation (Connecticut), prevent fatty liver disease (Ohio), and promote bone health (Oklahoma). A chemical in vegetables like broccoli and cauliflower leads to prostate cancer cell death (Arizona, Oregon), and compounds in green leafy vegetables and eggs can reduce the risk of macular degeneration (California).



A team of researchers from 25+ land-grant universities is illuminating how consumer preferences, marketing strategies, food labels, and trade and retail policies affect consumer behavior. This information helps design effective programs and policies that enhance consumption of nutritious foods. Effective marketing and informative labels also help consumers choose desirable fruits and vegetables.