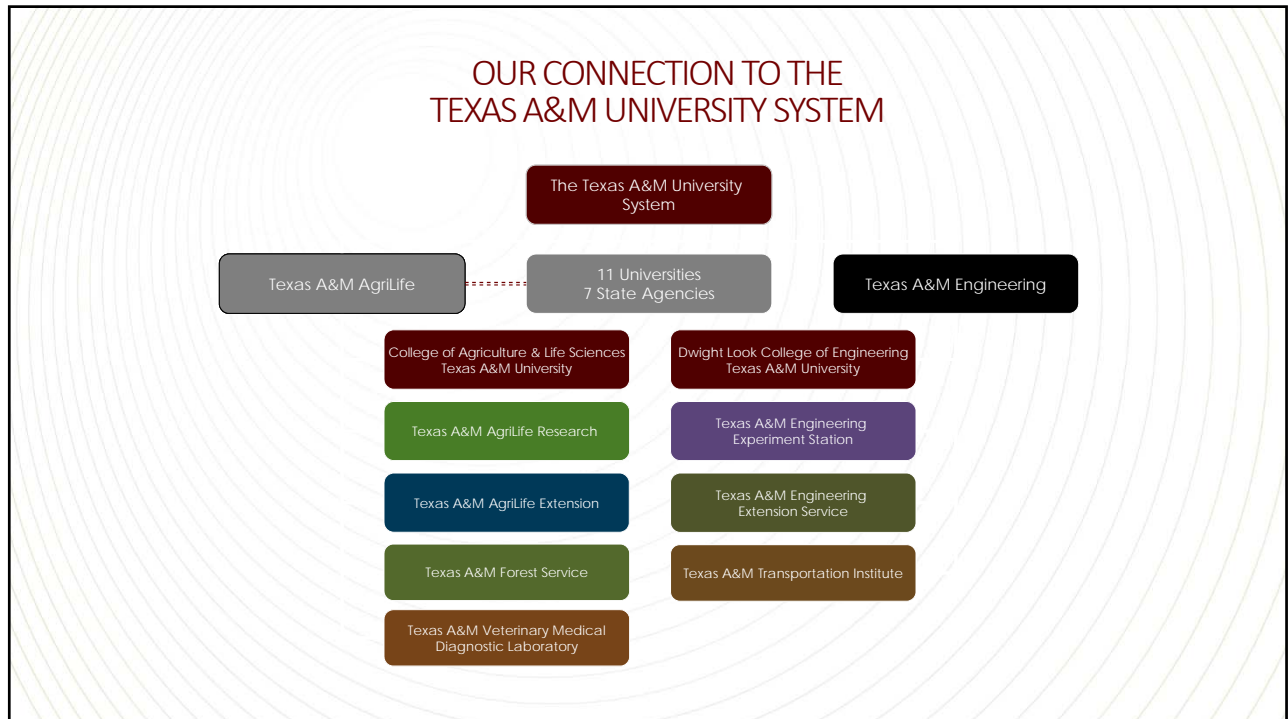# THE COLLEGE OF AGRICULTURE & LIFE SCIENCES AND TEXAS A&M AGRILIFE

Patrick J. Stover
Vice Chancellor for Agriculture and Life Sciences
Dean, College of Agriculture and Life Sciences
Acting Director, Texas A&M AgriLife Research

TEXAS A&M AGRILIFE

OUR CONNECTION TO THE TEXAS A&M UNIVERSITY SYSTEM

The Texas A&M University System

Texas A&M AgriLife	11 Universities 7 State Agencies	Texas A&M Engineering

College of Agriculture & Life Sciences Texas A&M University	Dwight Look College of Engineering Texas A&M University
Texas A&M AgriLife Research	Texas A&M Engineering Experiment Station
Texas A&M AgriLife Extension	Texas A&M Engineering Extension Service
Texas A&M Forest Service	Texas A&M Transportation Institute
Texas A&M Veterinary Medical Diagnostic Laboratory	

TEXAS A&M AGRILIFE RESEARCH

OUR MISSION – Develop new knowledge and tools to ensure healthy, safe, affordable supply of agricultural products; expand agricultural sustainability, profitability and environmental stewardship; and preserve and enhance natural resources.

AGRILIFERESEARCH.TAMU.EDU

NEW LEADERSHIP

Dr. David Lunt
Chief Operations Officer
AgriLife Research

Dr. David Ragsdale
Chief Scientific Officer
AgriLife Research

Dr. WHO?
Associate Director for Social-Behavioral Sciences
AgriLife Research

Dr. Clare Gill
Interim Executive Associate Dean & Associate Dean for Research

AGRILIFE LEADERSHIP CULTURE

- Promote a culture of trust, transparency, accountability and cooperation with **NO** friction

- Lead by example

- Build and strengthen capacity and opportunity

- Build and strengthen partnerships!

- Support a Market Place of Ideas/Experimentation

  - experiment/take risks - "Everything is better in Beta"

  - innovation is bottom up – administration enables!

- Make investments with parties at interest (skin in the game)

- Look forward/Limit navel gazing.

- Leverage and/or integrate programs and resources whenever possible
  Outstanding programs take advantage of and build from existing strengths
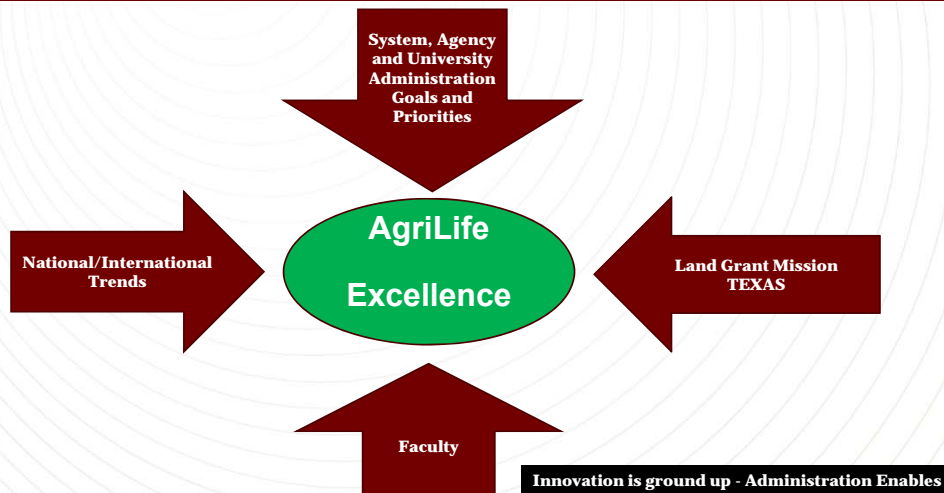
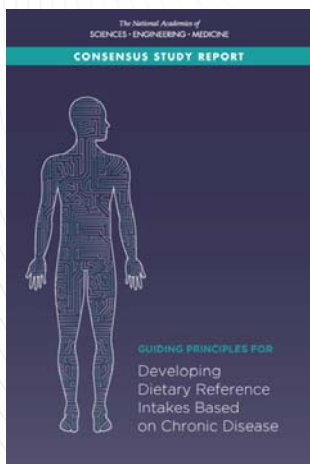AGRILIFERESEARCH.TAMU.EDU

TEXAS A&M AGRILIFE

TEXAS A&M
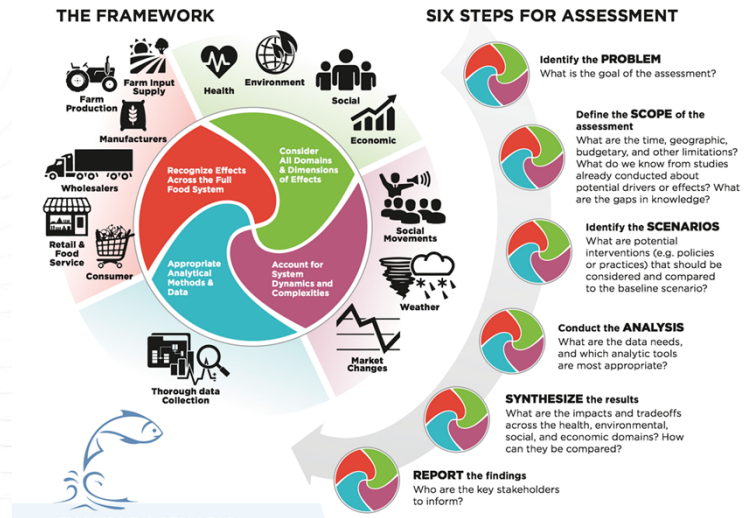AGRILIFE

AGRILIFE RESEARCH
BASIC -- APPLIED -- TRANSLATIONAL

System, Agency and University Administration Goals and Priorities

National/International Trends

AgriLife Excellence

Land Grant Mission TEXAS

Faculty

Innovation is ground up - Administration Enables

NEW EXPECTATIONS OF AGRICULTURE AND THE FOOD SUPPLY

The National Academies of SCIENCES · ENGINEERING · MEDICINE

CONSENSUS STUDY REPORT

GUIDING PRINCIPLES FOR
Developing
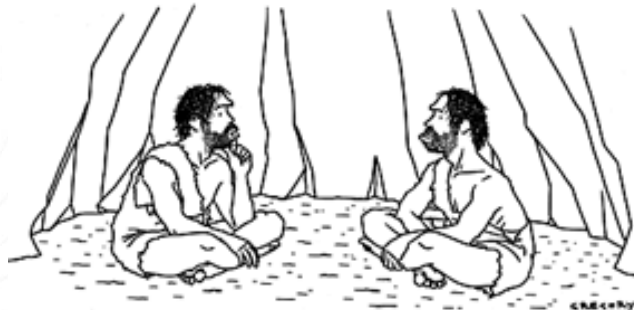Dietary Reference
Intakes Based
on Chronic Disease

- **Heath Care Costs**
  - Diet-related chronic disease costs the US economy 1 trillion USD annually
  - 50% of US adults are being treated for a chronic disease

- **"True Costing" agriculture and food**

- **Federal mandate for nutrition policy/guidance is now to lower health care costs.**
  - Food/agriculture is the opportunity to lower health care costs

Slide 1

Committee on a Framework for Assessing the Health, Environmental, and Social Effects of the Food System

THE FRAMEWORK

SIX STEPS FOR ASSESSMENT

Identify the PROBLEM
What is the goal of the assessment?

Define the SCOPE of the assessment
What are the time, geographic, budgetary, and other limitations? What do we know from studies already conducted about potential drivers or effects? What are the gaps in knowledge?

Identify the SCENARIOS
What are potential interventions (e.g. policies or practices) that should be considered and compared to the baseline scenario?

Conduct the ANALYSIS
What are the data needs, and which analytic tools are most appropriate?

SYNTHESIZE the results
What are the impacts and tradeoffs across the health, environmental, social, and economic domains? How can they be compared?

REPORT the findings
Who are the key stakeholders to inform?

Slide 2

TEXAS A&M
AGRILIFE
RESEARCH

DATA ARE MISSING!

"Something's just not right—our air is clean, our water is pure, we all get plenty of exercise, everything we eat is organic and free-range, and yet nobody lives past thirty."

THE LANDSCAPE
- *BALANCING THE EQUATION* -

Texas has transformed into an urban state

- It is imperative that the Texas Bioeconomy and Rural Culture endure
  - We will maintain our commitment to "classical" agriculture
- We need to meet the needs of <u>both</u> the urban and rural populations
  - Environmental Health
  - Public Health Nutrition
  - Bioeconomy
  - Labor Markets
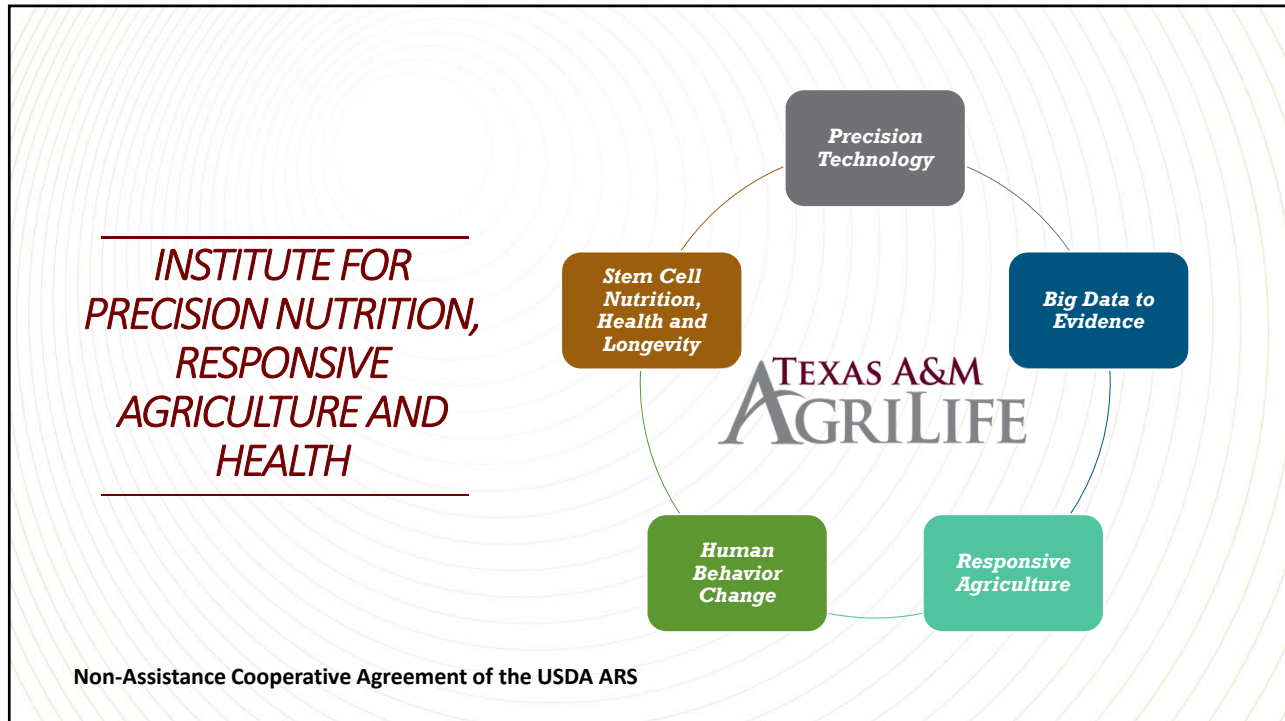- Connect Urban and Rural through "Balancing the Equation":

Healthy Agriculture + Healthy Environments = Healthy People + Healthy Economies

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AGRILIFE RESEARCH INITIATIVES

- ❖ Strategies to increase the Excellence and Impact of our Research
  - ❖ Center Directors and DHs Sub-committees
- ❖ External review of Core facilities, Institutes, Centers, Departments
- ❖ Developing a business model and governance structure around cores
- ❖ Build research on the consumer side of the food system
- ❖ Integrate Service, Extension and Research
- ❖ Metric-informed decision-making

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Non-Assistance Cooperative Agreement of the USDA ARS

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Precision Technology Hub: This hub brings together life scientists and engineers to develop and validate technologies which can be used in the field by Extension staff (Healthy Texas, A&M Students, military) that allow continuous and point-of-care measures of diet exposure, nutrition status and function, and disease state including metabolic, brain, liver, and kidney disease on a smart phone. This hub complements existing A&M strength in precision agriculture.

Healthy Texas for Animals

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Big Data to Evidence

Precision Technology

Stem Cell Nutrition, Health and Longevity

Big Data for Decision Making

Human Behavior Change

Responsive Agriculture

Big Data to Evidence Hub: This hub brings together life and computer scientists to develop new approaches to integrate large data sets that link indicators of human, environmental, economic and social health to give holistic assessments of the evidence underlying dietary and nutrient recommendations and policies, agriculture policy and related food system policy.

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Center for Evidence-Based Decision Making in Agriculture, Food, Environment and Health.

This center will affiliate with major international scientific evidence synthesis consortia to:

1) conduct systematic reviews that address critical questions for policy makers, producers and consumer groups;

2) develop methodologies for evidence synthesis from different types of data and

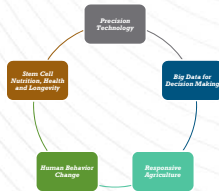3) develop rigorous evaluation research that supports AgriLife Service Agencies.

INSTUTITE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Responsive Agriculture

Responsive Agriculture Hub: This hub brings together life and agricultural scientists to develop commercial agricultural and other food products responsive to human dietary needs for health, consumer acceptance and waste reduction.
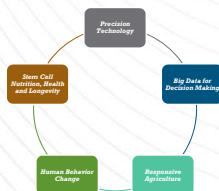

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Human Behavior Change

Human Behavior Change Hub: This hub brings together social scientists and information scientists to address important questions related to consumer and producer preferences and acceptance/adoption of new technologies, as well as agriculture and food products.

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Stem Cell Nutrition, Health and Longevity

Precision Technology

Stem Cell Nutrition, Health and Longevity

Big Data for Decision Making
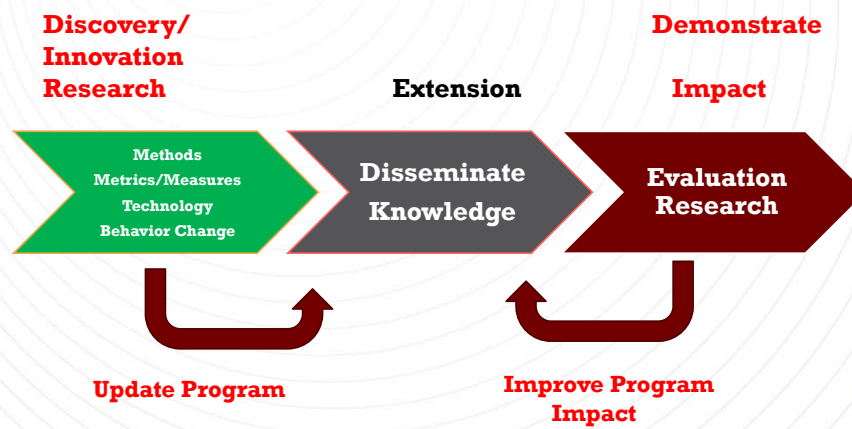
Human Behavior Change

Responsive Agriculture

Stem Cell Nutrition, Health and Longevity Hub: This hub brings together life scientists and biomedical engineers to understand the unique nutritional needs of adult stem cells during aging that preserve their number and quality to allow life-long tissue regeneration and healthy aging.

AGRILIFE RESEARCH

Discovery/ Innovation Research

Extension

Demonstrate Impact

Methods
Metrics/Measures
Technology
Behavior Change

Disseminate Knowledge

Evaluation Research

Update Program

Improve Program Impact

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Healthy Texas Food Labeling Core: This analytical core will be part of the Responsive Agriculture Hub and will develop analytic measures to assess food quality leading to a *"Healthy Texas"* label for food.

Big Data Analytics and Scientific Survey Core: This core will have information science expertise for developing surveys and web-based analytics to understand consumer preferences and values, and computational and relevant statistical expertise to support all hubs.

INSTITUTE FOR PRECISION NUTRITION, RESPONSIVE AGRICULTURE AND HEALTH

Partners:

Children's Nutrition Research Center | Baylor College of Medicine

Technische Universität Braunschweig, Germany

The Microsoft Research - University of Trento Centre for Computational and Systems Biology (COSBI), Italy

Cornell University, Division of Nutritional Sciences

THANK YOU!