Mushrooms & Health Summit
Exploring the Evidence

Johanna Dwyer, D.Sc, RD
Tufts University
Mushrooms

- Animal?
- Vegetable?
- Mineral?
- Fungi?
“Even the most nutritious mushrooms are of little real nutritive value. Their chief claim to dietetic recognition lies in their use as food accessories and dietary condiments. In no wise can they as a substitute for the substantial meats or the familiar vegetable products ordinarily consumed by man.”

Source: JAMA. 1913;61(6):414-415
Mushrooms: A Unique Kingdom

- Fungi
- Enormous variety
- Intersection of health and culinary
Mushrooms and Health: The Journey Begins

• Long history of folklore

• Mushroom science is young and thriving

• Emerging science findings exciting
Mushrooms’ Bioactive Compounds & Biological Consequences

• Updates on nutrient composition

• Discuss mushroom bioactives other than nutrients
Exploring Some Mechanisms Linking Mushrooms and Health

• Emerging science furnishes some interesting leads
Where Do Mushrooms Fit into Dietary Advice?

- Exploring mushrooms’ role in dietary patterns and importance driving forward improved human health and nutrition
Future Research Needs

• Your input
  – Enter joinspeaker.com/mushrooms into the web browser of your smartphone, computer or tablet
    • (Wireless code: mushroom)
  – Type a short answer to the question “What Topic Areas Do You See for Potential Future Mushroom Research?”
  – Responses will be shared throughout the Summit
  – All answers are anonymous

• Public/Private partnerships

• Mushroom research RFP process
  – If interested, please contact Research Coordinator Mary Jo Feeney at mj@feeney.us.com
MushROOM Growing Room

- Explore different mushroom varieties
- Experience first-hand the growing process
Bon Appétit and Enjoy Exploring the Evidence!
Impact of Mushroom Research on Human Nutrition and the Economy

Dr. Catherine Woteki

United States Department of Agriculture
Chief Scientist
Under Secretary for Research, Education, and Economics

Mushrooms and Health Summit
Washington, DC
September 9, 2013
USDA Science and Mushrooms

• USDA Research
• Extension
• Economic Data Collection & Analysis
• Need for International Collaboration on Nutrition Research
ARS Research

Impact on Immune System

Enhancing Vitamin D Content

Impact on Brain Function
National Nutrient Database

Includes Data on Different Mushroom Types and Cooking Methods

Analyzed under Mushroom Council Sponsorship
NIFA Research

Improvements in breeding, screening and selection of shiitake mushrooms for indoor cultivation at North Carolina A&T

Extension services for small farmers to establish new mushroom businesses in NC and at Cornell University

Food safety research at Penn State
ERS Research

- Economic factors important to supply & demand
- Data on mushroom production, shipments, prices, trade
- Factors driving dietary choices
  - Price, family income, time constraints, nutritional information, Federal food and nutrition assistance programs
National Fungus Collection

• Unique reference used internationally
• Identify poisonous mushrooms
• Information on mold prevention
Open Science

Collaboration

Coordination

Shared Resources
Platforms to Production

• Open Access to Scholarly Publications
• Open Access to Germplasm Collections
• Open Access to Genetic and Genomic Data
• Accelerated Technology Transfer
• Improved Agricultural Statistics
• Assembling Chief Scientists on Ag R&D
Agricultural Productivity

TFP index projections

Base year 2008 = 100

- Scenario 2: R&D constant, real $
- Scenario 3: R&D increases 1%/year, real $
- Scenario 1: R&D constant, nominal $

Historical trend
Historical actual