



Cooperative State Research, Education, and Extension Service, USDA

**Research and Outreach Programs that
Affect Nutrition Policy**

**National Public Policy Education
Conference**

Farm Foundation, 9/20/05

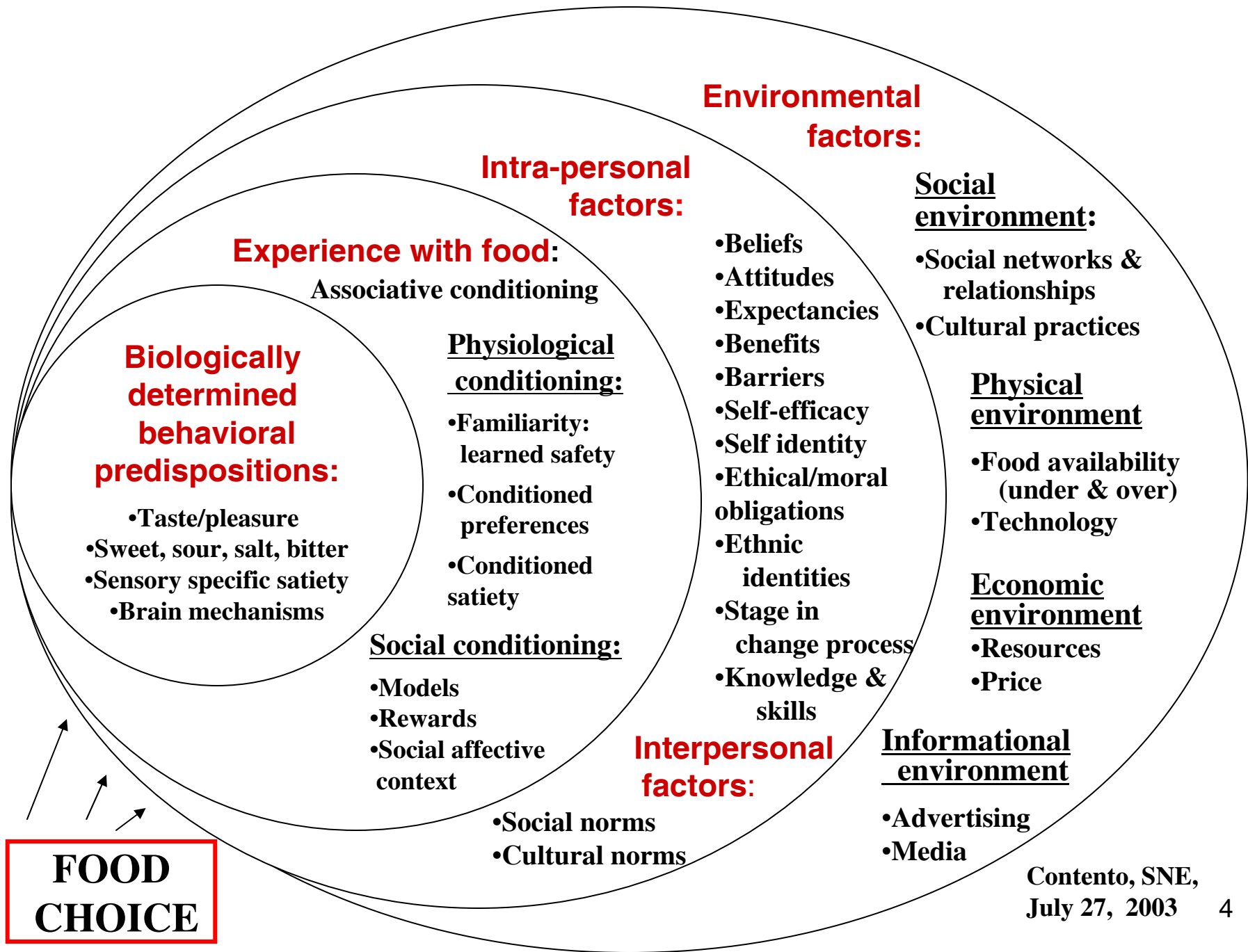
Susan Welsh, Ph.D., RD

Justification for Investing in Obesity Prevention

- Over 65% of U.S. population is over weight and 30 % is obese.
- Illness related to overweight and obesity costs society over \$117 billion annually.
- Without a change, 60 % will be obese and costs will double by 2020.

OBESITY PROBLEM: Why USDA? Why CSREES?

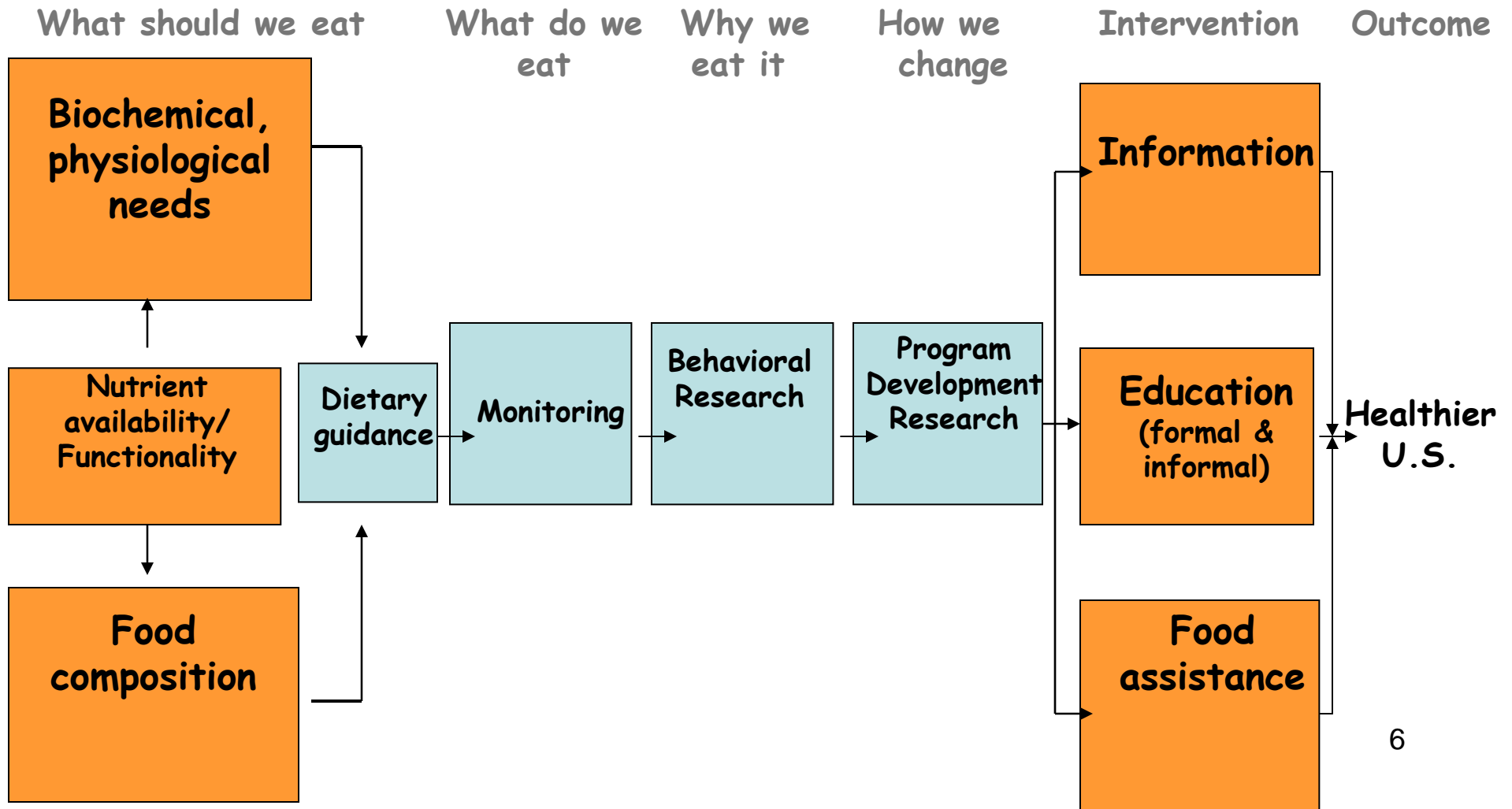
1. CSREES Goal: A Healthy Well Nourished Population
2. President's "Healthier US" Initiative: Healthy Diets & More Physical Activity
3. USDA is responsible for Ag & Food Systems
4. Obesity = imbalance of food intake & energy expenditure under the influence of heredity.
- 5. Etiology, prevention & treatment are multidimensional & extremely complex.**
- 6. CSREES & Land-grant system are uniquely suited to take a multidimensional, coordinated approach.**



USDA AGENCIES Involved in Nutrition – Primary Functions

- **ARS** – Intramural research aimed at understanding the needs for particular nutrients taking a “whole diet” approach
- **CSREES** – External research, ed & ext on nutrient needs, functional foods, nutrition ed research & intervention
- **ERS** –Economic and behavioral research on the determinants of food choices and how to influence outcomes.
- **CNPP**- Nutrition policy & promotion
- **FNS**- Food assistance & FSNE

CSREES: Research, Education and Extension for a HealthierUS



CSREES: Primary Functions

CSREES is the Federal Partner in the Land-Grant System

Federal: Administer Federal funds to implement research, education, & extension programs

Extramural: Provide leadership & support for research, education, & extension programs through the land-grant system & with other partners

CSREES: Food & Nutrition-related Research, Education & Extension Programs

Research

- Individual Investigator led (Hatch, NRI)
- Multi -State, -Disciplinary, -Functional (MRF, Integrated, NRI)

Education

- Higher Ed
- Multicultural Alliances, Info Systems

Extension

- Base Programs & Special Initiatives
- EFNEP, (FSNE)

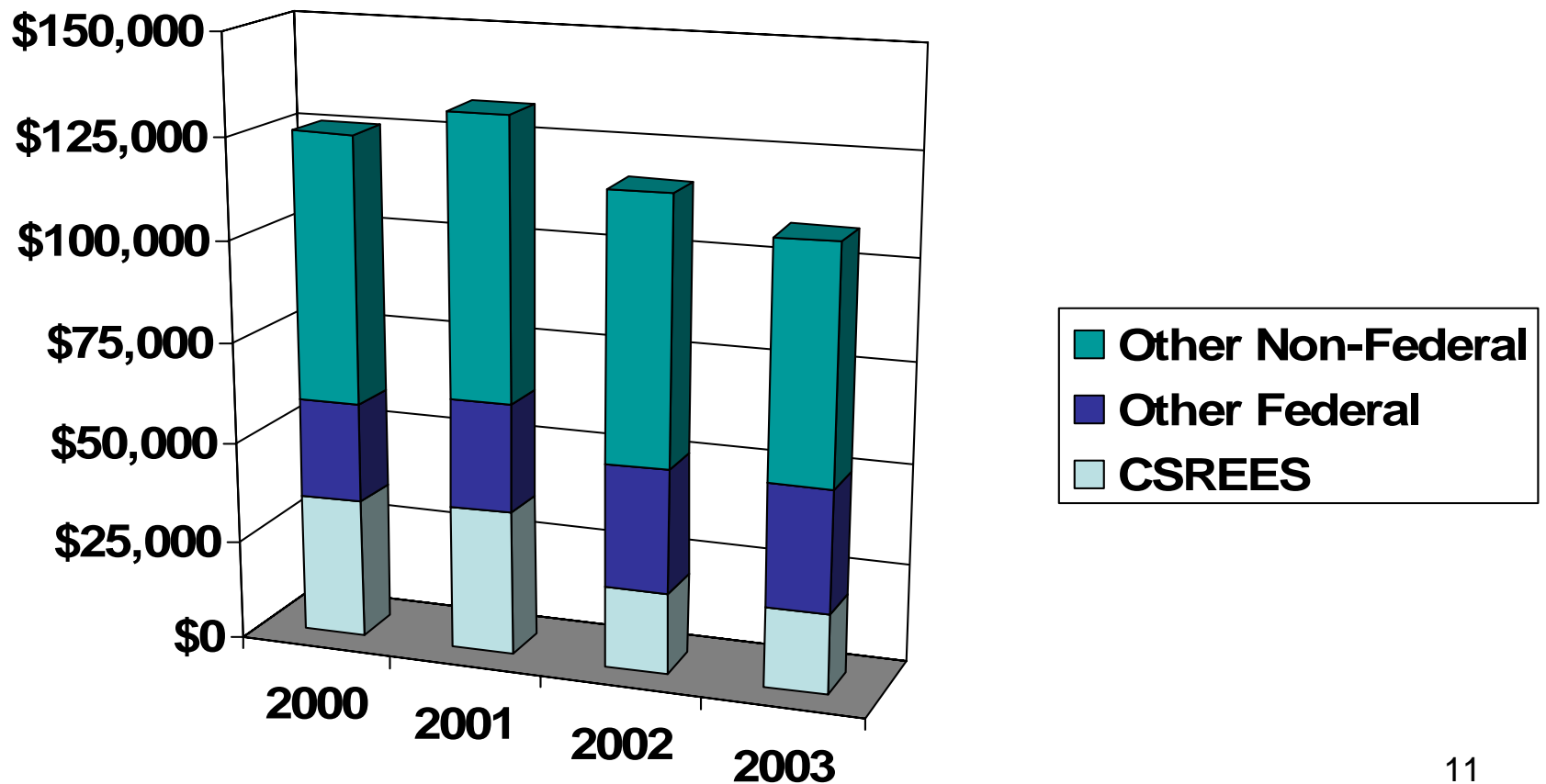
CSREES: Land Grant System

- 1862's: 57 State Ag Experiment Stations & Extension Services located at land grant universities
- 1890's: 18 Historically Black Colleges including Tuskegee
- 1994's: 33 Tribal Colleges

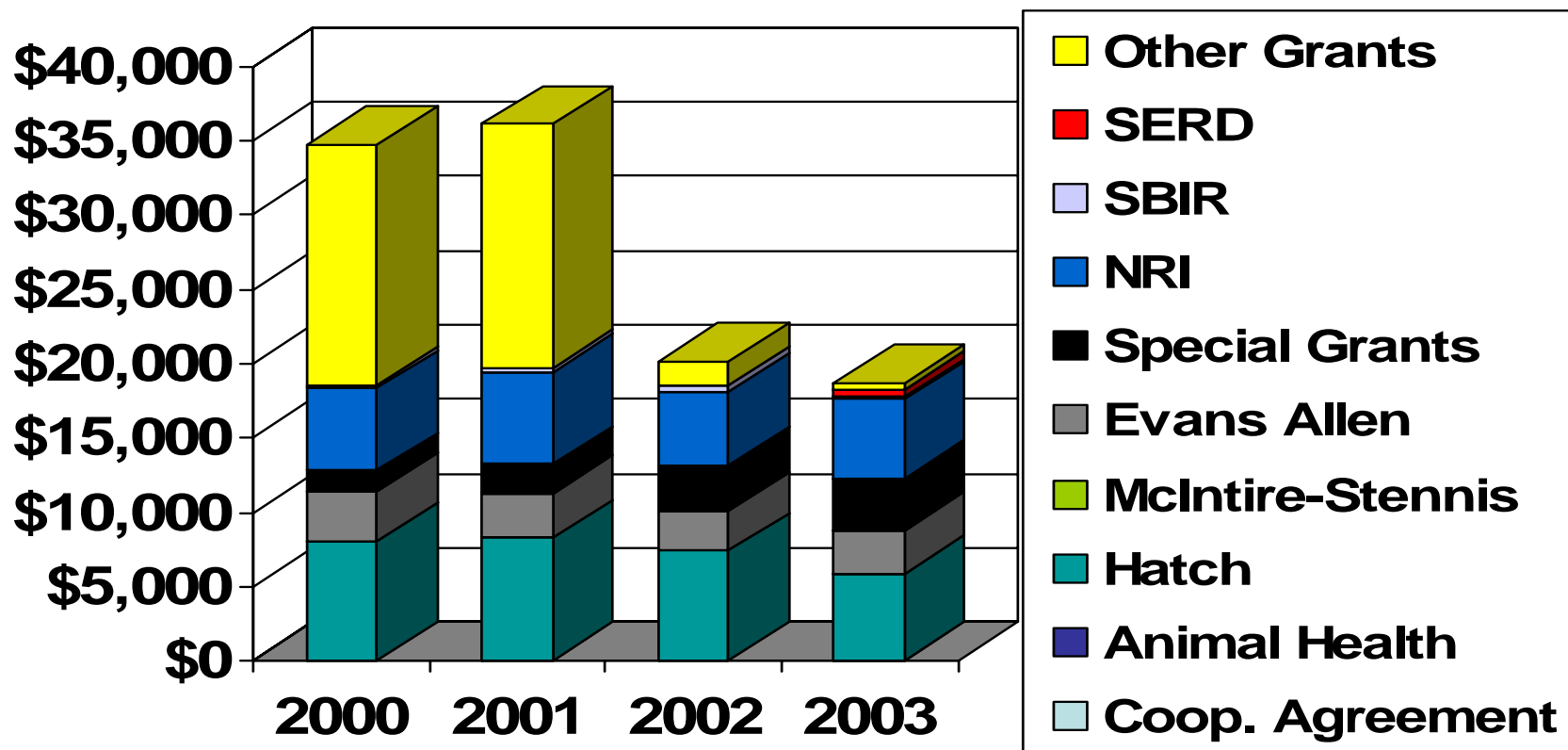
CSREES: Other Partners

- Other Universities & Colleges
- NGO's & Commodity Groups
- USDA Agencies
- Federal Agencies (NIH, CDC, FDA)
- White House

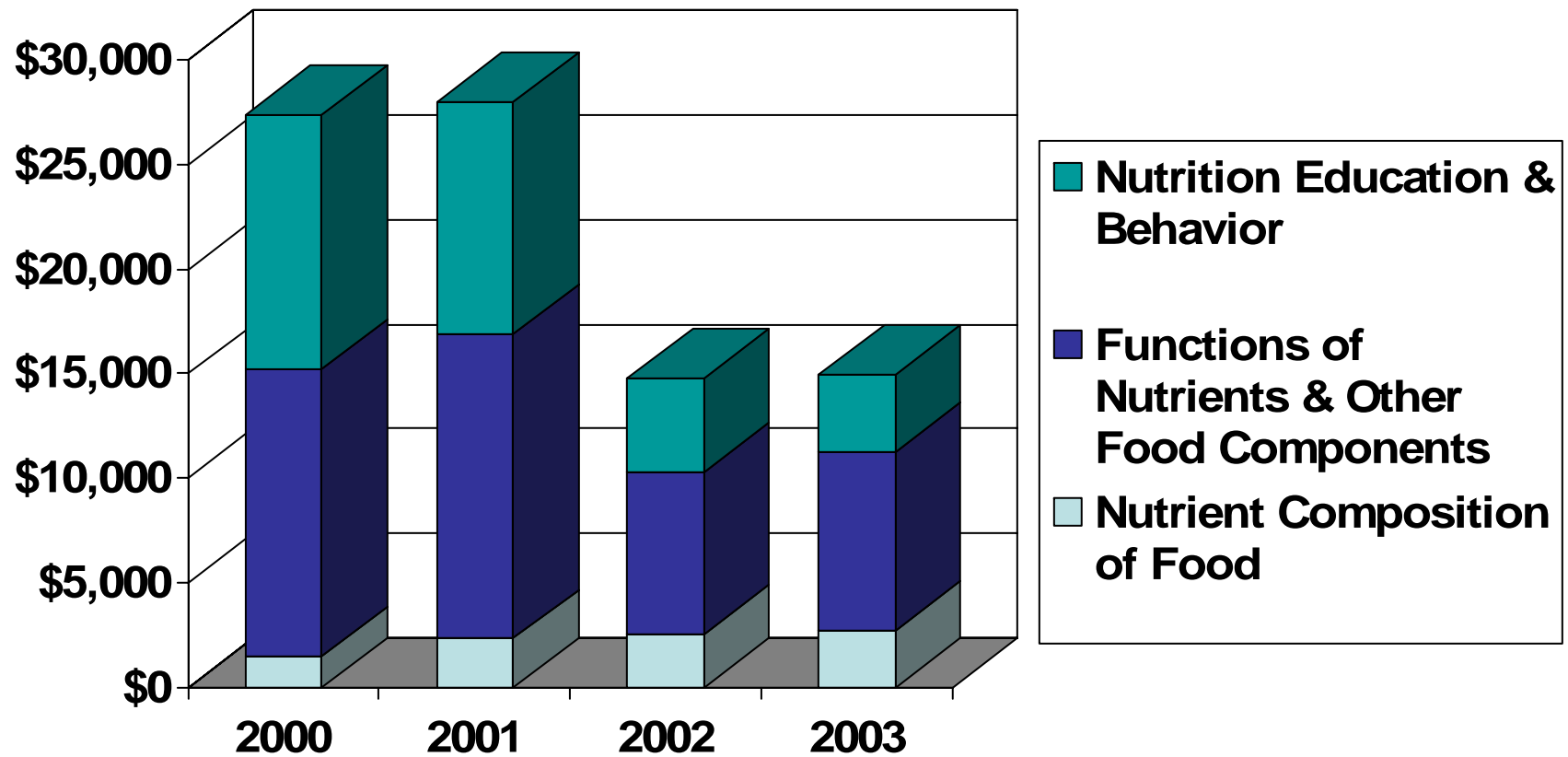
Funding for All CSREES-Related Human Nutrition Research, 2000-2003, (in thousands)



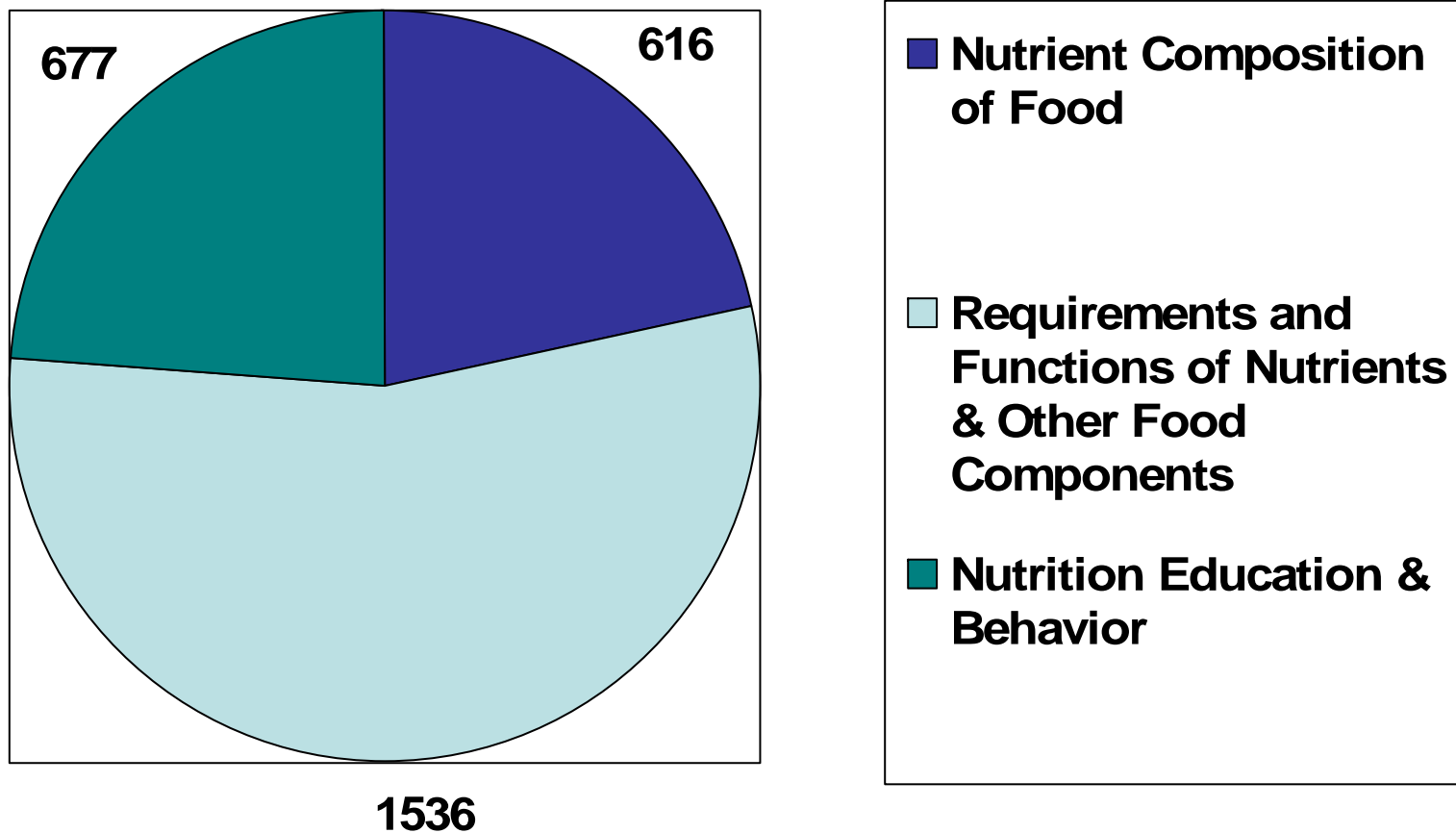
CSREES Funding for All Human Nutrition Research Programs by Source, 2000-2003 (in thousands)



CSREES Funding for Human Nutrition Areas, 2000-2003 (in thousands)



Number of Projects Within Human Nutrition Research Areas, 2000-2003



Nutrient Composition & Function: NRI 31.0

Bioactive Food Components for Optimal Health

National Program Leader: Etta Saltos esaltos@csrees.usda.gov

PRIORITIES:

- Mechanistic studies of bioavailability, function, efficacy and safety of physiologically active dietary components and neglected nutrients
- Interrelationships among dietary components in promoting health
- Mechanisms underlying relationship between diet and optimal health

*Priorities listed here are from 2005, but are not expected to change significantly in 2006

“Bioactive Food Components for Optimal Health”

Program Statistics – FY 2005

- # of Proposals Submitted – 73 (61 standard research proposals, 2 conference proposals, 10 seed/equipment proposals)
- # of Proposals Awarded – 14 (8 standard research grants, 2 New Investigator awards, 1 conference grant, 2 equipment grants, 1 standard strengthening award)
- % Success – 18% (standard grants)
- Average Award Size - \$375,000 (standard grants)
- Average Award Duration (years) – 2.9 (standard grants)

Examples of Research Funded through the NRI on Nutrient Composition and Function

- Dietary Choline and Folic Acid and Optimal Brain Development (Ziesel, University of North Carolina)
- Regulation of Embryonic Vascular Development by Vitamin A (Zile, Michigan State University)
- Processing Effects on the Content and Absorption of Grape and Berry Polyphenolics (Howard, University of Arkansas)
- Expanding the market of Anthocyanin-Rich Commodities through Characterization of components with Biological Activity (Giusti, Ohio State University)
- Maternal/Fetal Bone Health in Pregnant Adolescents (O'Brien, Johns Hopkins University)
- Estimating Human Physiological Zinc Requirements (Hambridge, University of Colorado)

Nutrition Education & Behavior: NRI 31.5

“Human Nutrition and Obesity”

National Program Leaders: Etta Saltos esaltos@csrees.usda.gov
Susan Welsh swelsh@csrees.usda.gov

- **All projects must address some aspect of food as it relates to obesity**
- **Integrated Projects must incorporate 2 of the 3 university functions: research, education & extension/outreach**

“Human Nutrition and Obesity” Program Priorities*

- Research – funding limit \$500 K total–Epidemiologic studies of factors related to obesity prevention (including secondary data analysis)
- Integrated – funding limit \$1.5 M total
 - Influence of social/psychological factors
 - Role of lifestyle, physical activity, culture/ethnicity
 - Role of educational factors, access to information
 - Influence of economic factors, public policy

*Priorities listed here are from 2005, but are not expected to change significantly in 2006

“Human Nutrition and Obesity” Program Statistics – FY 2004

- # of Proposals Submitted -- 88
- # of Proposals Awarded – 13 awards, plus 2 Bridge Grants
- % Success – 15% (excluding Bridge Grants)
- Average Award Size - \$790,000 (excluding Bridge Grants)
- Average Award Duration (years) – 3.7 years (excluding Bridge Grants)

Examples of NRI-Funded Integrated Projects in Nutrition Education and Behavior

- **Risk for and Prevention of Early Childhood Overweight: Does the WIC Program play a role? (Harrison, UCLA)**
- **Socially Constituted Food Consumption of Adolescents (Kennedy, University of Nebraska)**
- **Providing Nutrition Information at the Point of Sale in Dining Service Environment (Kolodinsky, University of Vermont)**
- **Behavior change for Obesity Prevention in Young Adults (10 universities)**
- **Seven Generations of Health: A transgenerational approach to Human Nutrition and Obesity Intervention in Indian Country (Goodman, SIPI)**
- **Tween Power: Preventing Obesity through wise Expenditures of Resources (Anliker, University of Massachusetts)**
- **WIN the Rockies: A Food and Nutrition-Related Behavior Change Consortium Project in WY, MT and ID (Moore, University of Wyoming)**

Formula: Multistate Research Fund

- Stage-Based Interventions to Increase Fruit & Vegetable Intake in Young Adults
- Parent & Household Influences on Calcium Intake Among Preadolescents
- Systems Analyses - Relationships of Ag & Food Systems to Community Health
- Sustaining Local Food Systems in a globalizing Environment
- Econ & Psych Determinants of Household Savings Behavior

Cooperative Extension System

- Partnership of CSREES & Land-Grant Universities
- **Base Program** in Nutrition & Health: Community programs to help individuals, families & communities make healthy food & lifestyle choices
- **Special Initiative:** Reversing Childhood Obesity Trends

Cooperative Extension System Focus Area:
**REVERSING CHILDHOOD
OBESITY TRENDS**

Mission:

Reduce the prevalence of childhood obesity

via Extension's innovative programming, and unique delivery modes to achieve healthy weights.

Reversing Childhood Obesity Leadership Team Accomplishments

- **Established a Web Site**
<http://www.CNR.Berkeley.EDU/cwh/index.html>
- **Publish Bi-Monthly Newsletter focusing on pediatric research**
- **Established State contacts nationwide**
- **Developing online course In Childhood Overweight and Obesity**
- **Developing a Family-Centered Training and Resource Kit**

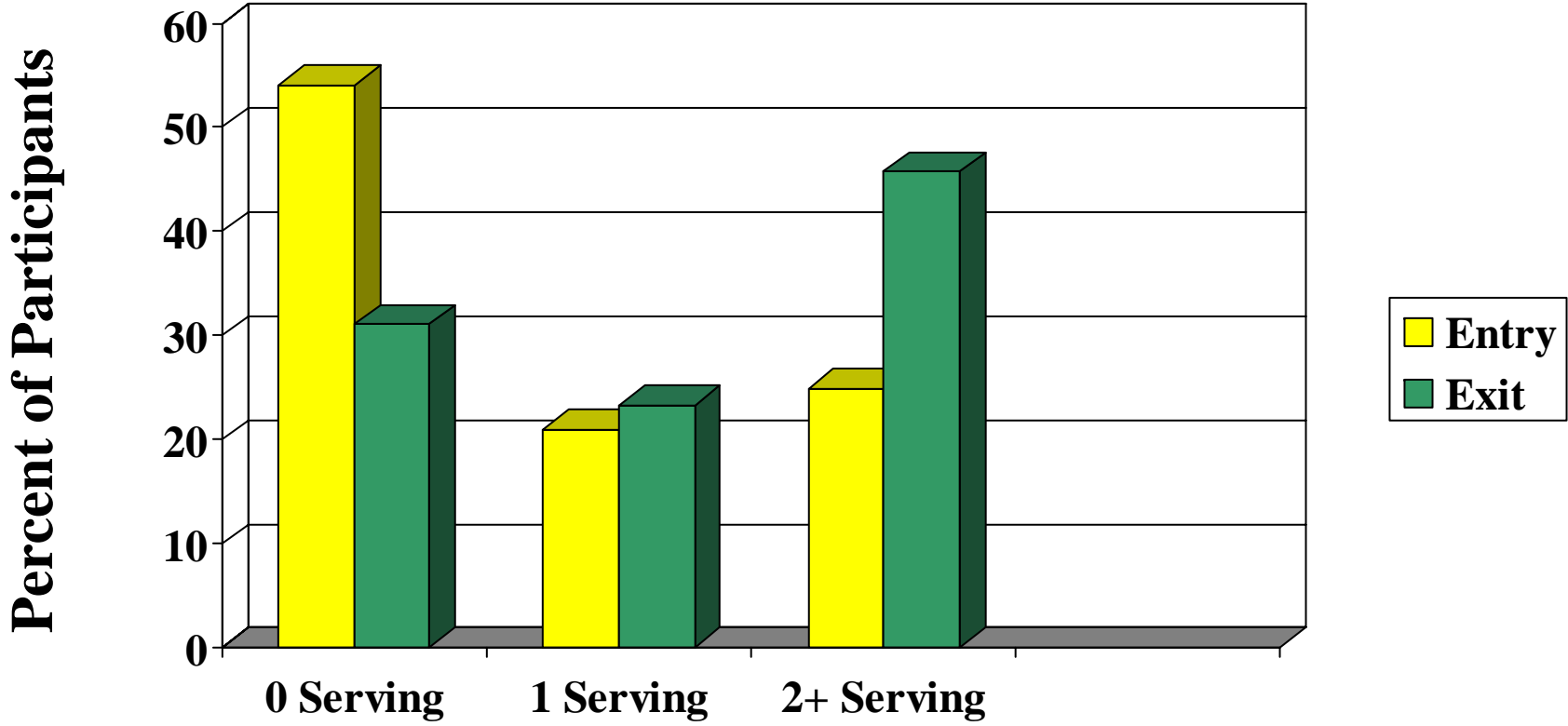
Expanded Food and Nutrition Education Program (EFNEP)

Budget 2005: \$58M

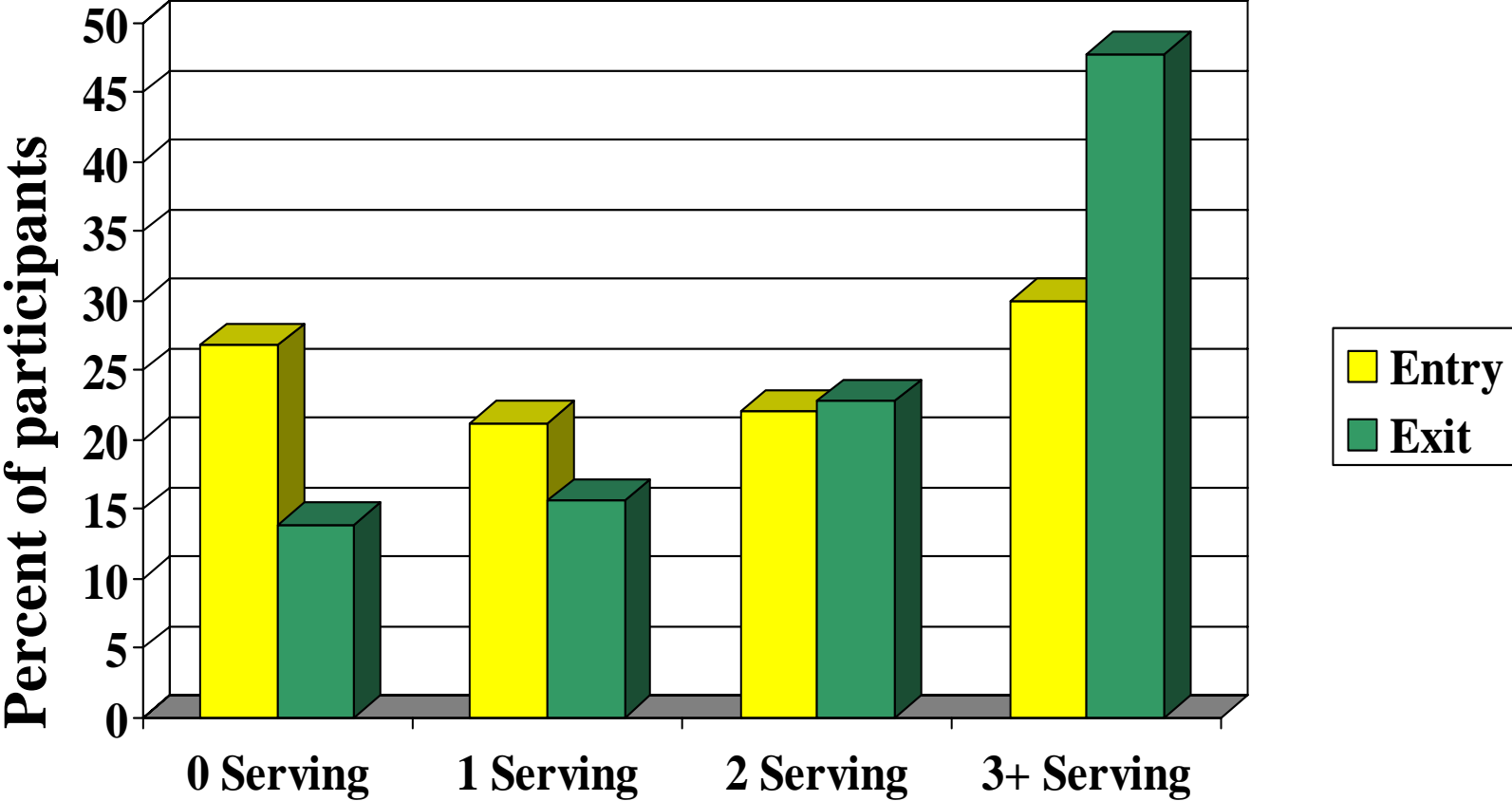
EFNEP outcomes that reduce risk of obesity

- Increased fruit and vegetable intakes
- Increased dairy intakes
- Increased food security
- Increased fiber intakes
- Increased physical activity
- Breastfeeding (can help both infants & mothers)
- Learning appropriate portion sizes
- Shift from weight focus to health focus
- Choosing healthy beverages – water, milk
- Decreasing sedentary activity

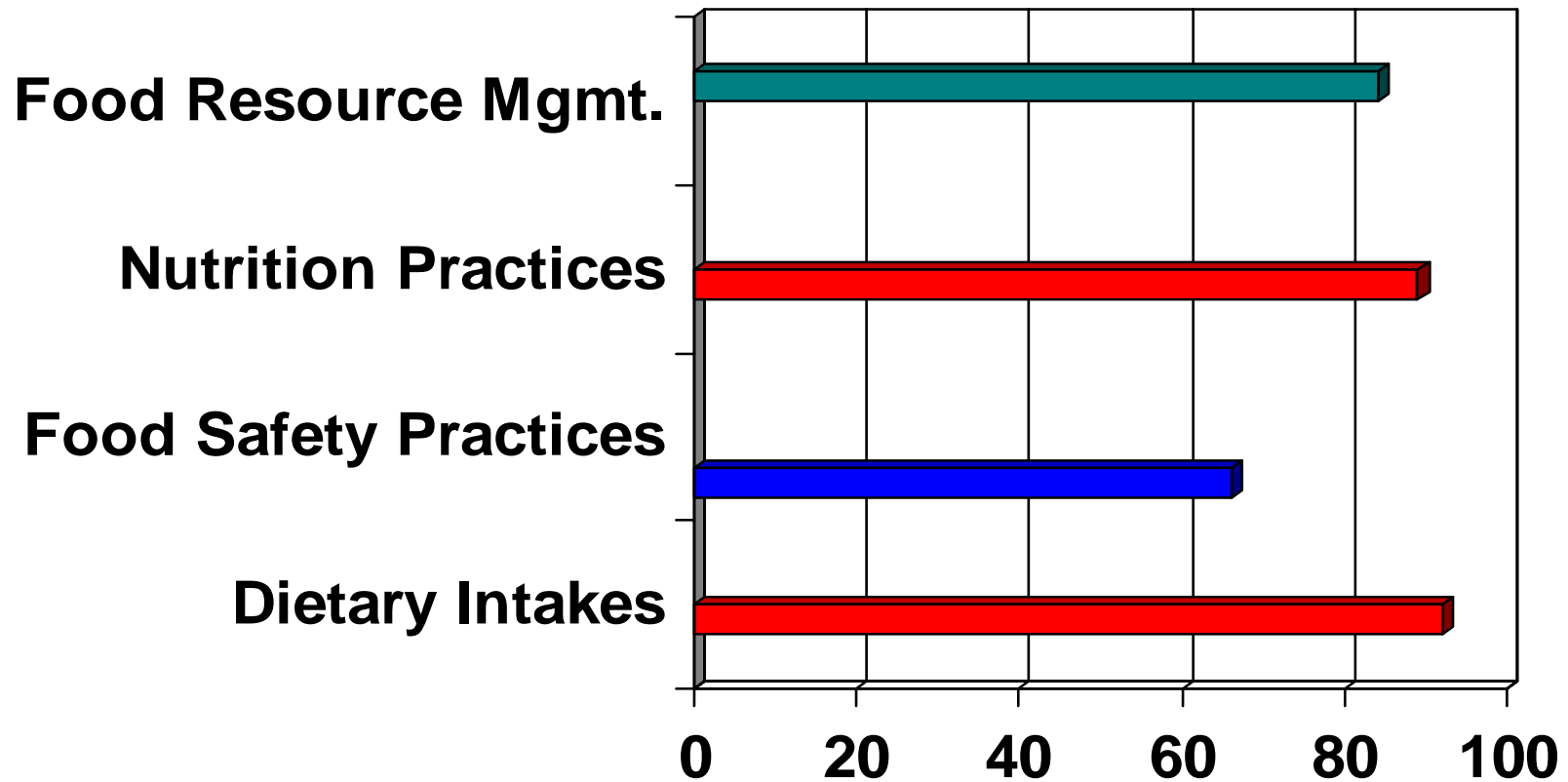
EFNEP: SUMMARY OF FOOD GROUP IMPROVEMENT - FRUIT



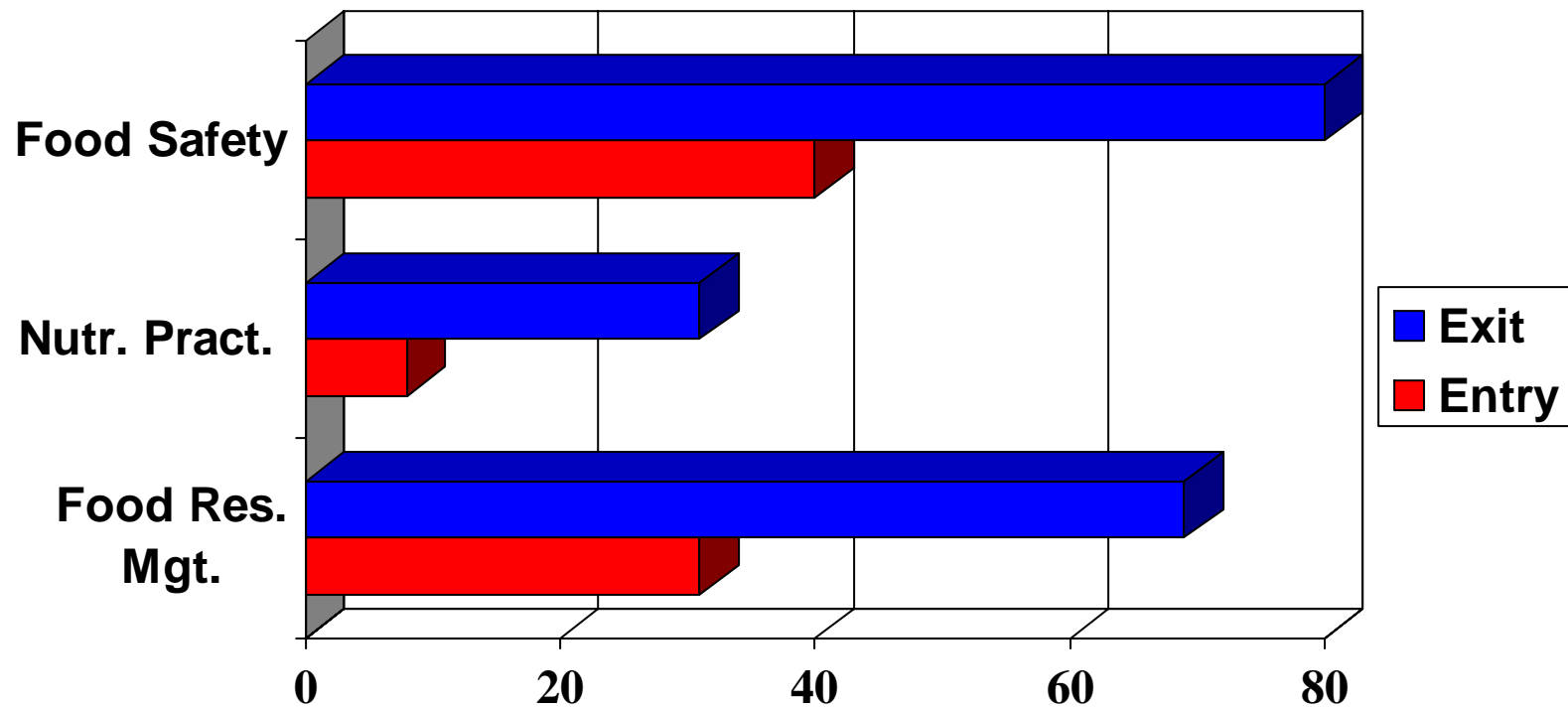
EFNEP: SUMMARY OF FOOD GROUP IMPROVEMENT - VEGETABLES



EFNEP Participants With Improved Practices



EFNEP Participants with Acceptable Practices



EFNEP: Physical Activity Impact

About 40% of graduates report more often participating in at least 30 minutes of moderate physical activity every day



CSREES, Cooperative Extension System, 4-H Enrollment

- Healthy Lifestyle Ed 2,376,907
 - Foods & Nutrition 1,006,469
 - Food Safety 421,970
 - Fitness & Sports 111,338
 - Physical Health 35,148

Estimate: 4-H reaches 23% of youth sometime between K-12

WHAT WE WANT TO ACHIEVE

- Development of the research base for dietary guidance
- Understanding of the factors that influence choices related to food and physical activity
- Development of effective strategies to change behavior
- Development of sensitive instruments to measure change
- Increases in the numbers of researchers & educators capable of addressing complex nutritional issues

CSREES Information

- CSREES Web site: www.csrees.usda.gov
Food, Nutrition and Health is one of the National Emphasis Areas which includes an obesity page
- White paper on obesity available on Web: http://www.csrees.usda.gov/newsroom/white_papers/obesity_Aug04.pdf

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