

# World Initiative for Soy in Human Health (WISHH)

*“Enhancing Human Well-Being  
Through Soy”*



# Overview

- Mission
- Services offered
- Where we work



# WISHH - Mission

“To create sustainable solutions for the protein demands of people in developing countries through the introduction and use of U.S. soy products.”



# Services - Food Technology

- Evaluating food production systems
- Providing food technology training (product development, storage, handling, etc.) for the inclusion of soy foods in local diet
- Conducting cost benefit analysis on incorporating soy products as ingredients
- Increasing awareness of the health benefits of soy
- Recipe development

# Technical Assistance



# Services - Business Development

- Technical assistance - ways soy may be incorporated into food products to expand businesses, maximize profits and adapt to changing markets
- Supporting new product, formulation & market development
- Business development training in areas such as marketing, launching a new product, business management
- Market research

# Services-Nutrition Services

- Designing & planning nutrition interventions and evaluating nutritional needs
- Related activities including nutrition education, training and sharing research findings
- Spearheading nutritional surveys (protocol, training data collectors, data analysis)

# Services - Technical Assistance in Program Development & Implementation

- Support services to PVO's, UN agencies & foreign governments in the development of programs & projects
- Intervention area research
- Benchmarking
- Program design
- Proposal writing



# Highlighted Successes

- Increased knowledge & awareness of soy and its benefits (functional & health)
- Improved business practices
- Equipment updates

# Highlighted Countries of Focus

- Sub Saharan Africa:
  - East Africa Region, DRC, Nigeria, Ghana, Senegal, Cameroon, Southern Africa Region
- Central America, Caribbean:
  - Honduras, Guatemala, Haiti
- Asia:
  - Bangladesh
  - Cambodia
  - Philippines

# Soy Basics

# Soy Composition

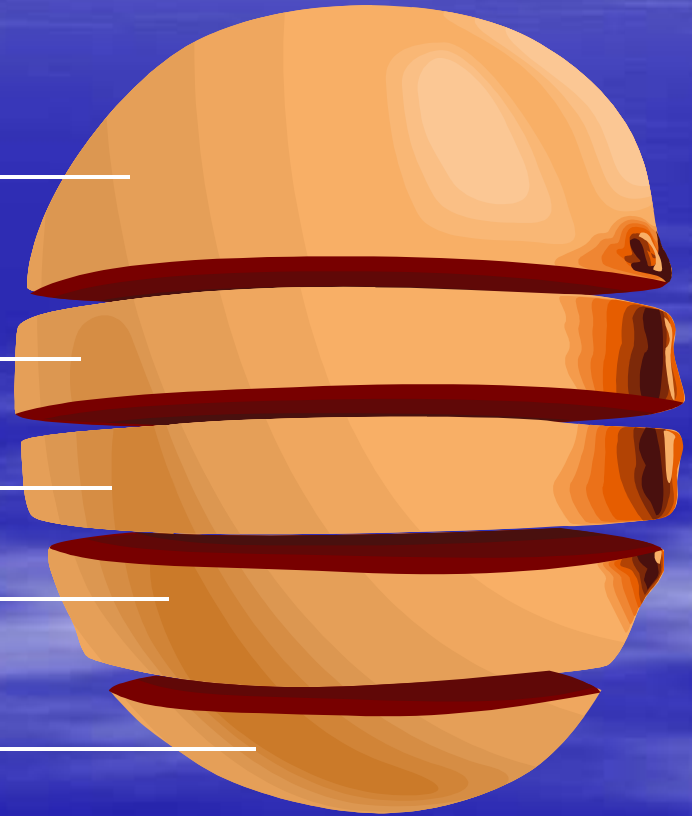
**36% Protein**

**15% Soluble Carbohydrates**  
(Sucrose, stachyose, raffinose, others)

**15% Insoluble Carbohydrates**  
(Dietary fiber)

**18% Oil**  
(0.3% Lecithin)

**16% Other**



# Soy Protein Products & Nutritional Benefits

- Isolated Soy Protein - 90% Protein
  - Used as an ingredient in high high-protein foods
    - dairy foods
    - nutritional supplements
    - beverages
    - meat systems
    - infant formulas
    - cream soups
    - sauces
    - snacks
    - milk replacers
    - nutraceutical formulations
  - Highly suited for with high protein needs due to growth, famine, and chronic diseases (HIV/AIDS and tuberculosis)
  - May be fortified with various micronutrients and minerals.
  - Shelf life: 1 year +

# Soy Protein Products & Nutritional Benefits

- Soy Protein Concentrate – 70% Protein
  - Use - Variety of meat product systems, baked goods, and dairy applications.
  - Highly digestible & well suited for children, pregnant and lactating women, the elderly, people who are ill, and situations where protein nutrition is of utmost importance.
  - May be fortified with various micronutrients and minerals.
  - Shelf life: 1 year +

# Soy Protein Products & Nutritional Benefits

- Textured Soy Protein - 50-70% Protein
  - Used in a wide variety of foods - Key ingredient with minced meat for burgers, sausages & in vegetarian foods and stews.
  - Dry product, easily re-hydrated and takes no additional cooking time when used as an ingredient in another dish.
  - Takes on the taste of the food / recipe
  - May be fortified with micronutrients and minerals.
  - Shelf life: 1 year +

# Soy Protein Products & Nutritional Benefits

- Defatted Soy Flour - 50% Protein
  - Used in wide variety of products including bread, complementary foods, cookies, muffins, cakes, pastas
  - Common ingredient & supplement in blended cereal products, such as Corn-soy blend, Soy-fortified wheat flour, Rice-soy blend, others
  - Used to produce textured soy flour (TSF)
  - May be fortified with micronutrients & minerals
  - Shelf life: 1 year +



# Physical Forms

- Spray dried powders



- 90% protein
- Solubility
- Water absorption
- Particle size
- Density
- Viscosity
- Dispersibility

- Textured proteins



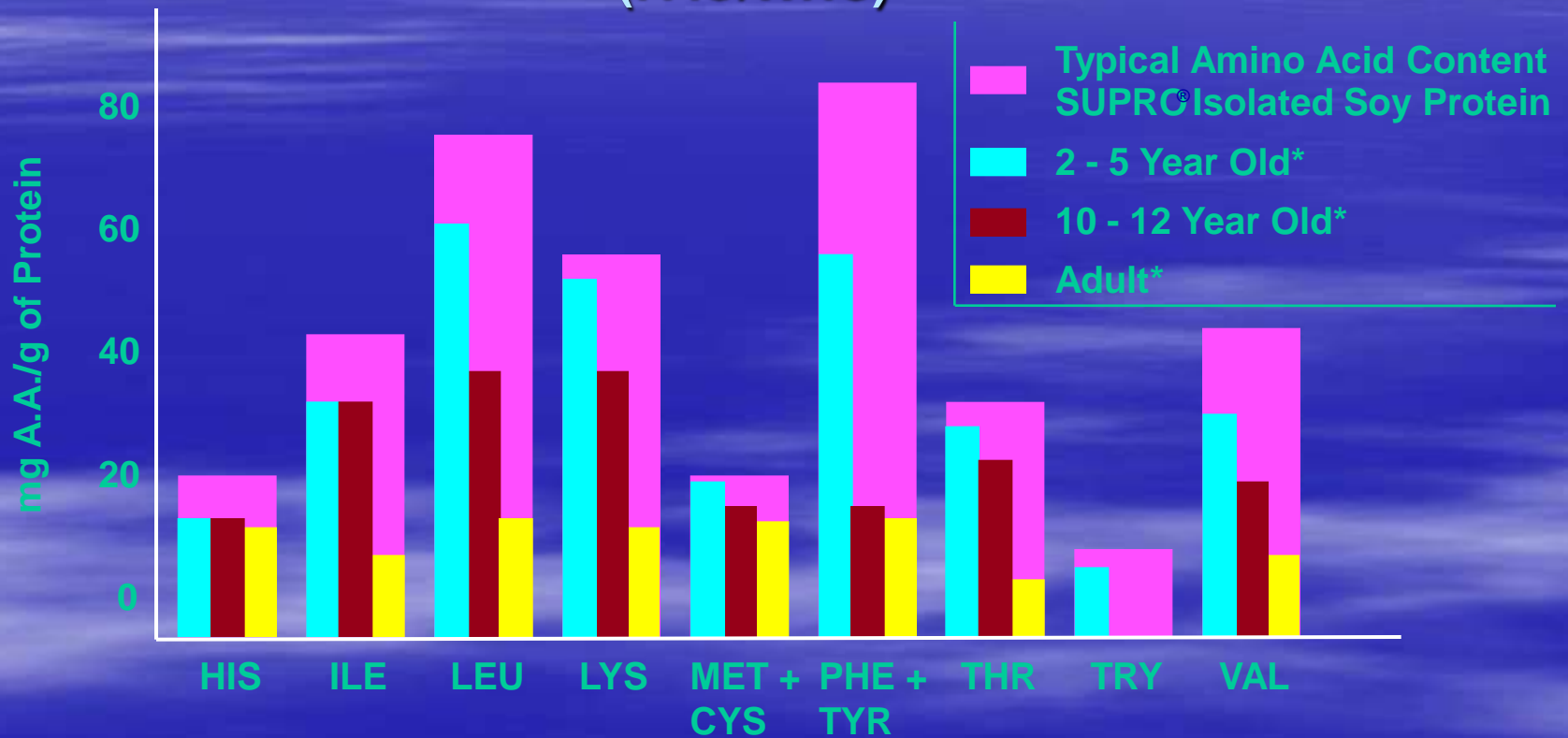
- 50-70% protein
- Flavor
- Color
- Texture
- Dimensions
- Composition

# Protein Basics

- Protein consists of amino acids (“building blocks”)
- There are 20 amino acids
- Amino acids can be classified as –
  - ↳ Indispensable (essential)
  - ↳ Dispensable (non-essential)

# Essential Amino Acid Requirements

(FAO/WHO)



\* Suggested Pattern of Requirements  
(FAO/WHO/UNU, 1985).

# Health Benefits

- Malnutrition
- Cholesterol
- Hypertension
- Certain cancer
- Menopause
- Osteoporosis
- Weight loss

# Core Applications

- Nutrition Bars
- RTD (Ready to Drink), Powdered Beverages
- Meat, Poultry, Seafood
- Meat Alternatives
- Baked Goods
- Extruded, Baked Snacks
- Ready To Eat & Hot Cereals, Porridges
- Pasta
- Dairy Alternatives
- Infant Formula
- Clinical Nutrition

# RTD BEVERAGES



ANDEAN

MEXICO / CAC

# RTD BEVERAGES

BRAZIL



Additional Information:

World Initiative for Soy in Human Health  
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[www.wishh.org](http://www.wishh.org)