Traditional and local food systems: nutritional, social and sustainable balance to global supply chains

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TRADITIONAL FOOD INTERNATIONAL
CESENA
4 October 2012
What is the potential of the traditional in the mediation of food system and market transformation?
Euterpe edulis
açaí
- rich in phenolic antioxidants

Perfect for your body...
Açaí (ah-sigh-ee) is packed with antioxidants, healthy omega fats and fiber. It is no surprise that Açaí is now being called the world’s top superfood. Perfect Açaí retains the amazing nutrients of the Açaí berry by using only 100% Sambazon Freeze Dried Organic Açaí.

Perfect for the planet...
Made exclusively with Sambazon Sustainable, Fairly Traded, Certified Organic Freeze Dried Açaí. Your purchase helps Sambazon's efforts to protect the Amazon rainforest and the indigenous people of the Amazon.
Traditional food systems are maintained by (Indigenous) people “who retain knowledge of the land and food resources rooted in historical continuity within their region of residence” and include traditional foods accessed within traditional knowledge from their natural environment through farming or wild harvesting.
Traditional Food Systems Features

• Adaptive
  – Nutritional diversity and balance

• Ecosystem focus
  – Local
  – Biodiverse

• Economy
  – Subsistence
  – Reciprocity, complementarity
  – Risk adverse

• Socially and culturally rooted
Food consumption

COMPONENTS OF FOOD SYSTEMS

Nutritional Status

Environment

Society, culture

Economy
Main Points

Food consumption and nutrition of human populations has congruent biological, environmental, socio-cultural and economic components.

Contemporary market-controlled and globalized “food” systems are dominated by economic considerations

.......... as are consumer decisions.
Food consumption

Nutritional Status

Supply, price

Demand

Economy: Agriculture, Capital

MARKET-CONTROLLED SUPPLY SYSTEM(S)
Food consumption

Nutritional Status

Availability

Demand

Economy: Agriculture, Capital

MARKET-CONTROLLED SUPPLY SYSTEM(S)
MARKET-CONTROLLED SUPPLY SYSTEM(S)

Nutritional Status

Food consumption

Availability

Natural resources, land

Demand

Labour, knowledge

Economy: Agriculture, Capital

Environment

Society

Accessibility
Limitations on Availability (Choice) in Contemporary Food Systems

• Globalized value chains and trade can (and often do) exclude:
  – local foods
  – traditional foods
  – products of biodiversity
Kenyan mundazi
Simplification of ecosystems and food systems negatively affects human and ecosystem health
Global Food Insecurity

• 923 million people hungry worldwide
• 2 billion affected by micronutrient deficiencies
• Obesity and non-communicable disease increasing
• 1.4 billion live on less than $1.25 per day

• Population growth
• Urban majority depend on purchased food
• Emerging crisis: cost of food increasing
INTERCONNECTED CRISSES

• Food Security, Nutrition and Health
• Environment
  – Food production, processing and distribution greatest contributor to Greenhouse Gases.
  – Population demographics demand 70-100% more food and 20-40% more farmland by 2050.
  – Loss of natural ecosystems and biodiversity.
• Economic
Nutritional Status

Food consumption

Economy: Agriculture, Capital

Environment

Real costs

Society

Environmental "footprint"

Cost, availability

Demand

Labour, knowledge

Natural resources, land

Income

Natural resources, land
Main Points

Food consumption has biological, environmental, socio-cultural & economic components. Market-controlled “food” systems dominated by economic considerations. Global intensive and local (smallholder) agricultural systems essential and complementary for sustainable food and nutrition security.
Local Food Systems

Situating the traditional

• North America
• Brazil
• East Africa
Local Food Systems as Transformative Models

Defining Values

• Environmental
• Quality/Health
• Social
• Cultural
Local Food Systems as Transformative Models

Situating the Traditional

• Culture
  – Heritage
  – Identity
  – Norms
  – Traditional products
    • diversity
  – Traditional production
Nutritional Status

Food consumption

Food resources

Cost, availability

Demand

Labor, knowledge

Natural resources, land

Economy:
Agriculture, Capital

Environment

Real costs

Environmental "footprint"

Human behaviour and decision

tradition?

- oversight
- public

investment
Marketing of local foods via direct-to-consumer channels grossed $1.2 billion ............

...but remains less than 2 % of retail food market and involves only 5% of total farms.

USDA, 2011 ERR128.
Local Food Systems as Transformative Models

Situating the Traditional

• Culture
  – Heritage
  – Identity
  – Norms / values
  – Traditional products
    • diversity
  – Traditional production
Agricultura Familiar in Brazil

- 38% of the agricultural value produced in country on 24% of agricultural land
- employs over 75% of workers in agricultural sector
- 70% of beans, 87% of manioc, 46% of corn, 34% of rice, 58% of milk, 59% of pork, 58% of bananas for domestic market

(IBGE, Censo Agropecuário 2006)
Smallholder Farms
Keystones for Food and Nutrition Security

- Can be more productive and sustainable than large farms
  - Family labour
  - Micro-environment management
Segurança Alimentar e Nutricional

Consiste na realização do direito de todos ao acesso regular e permanente a alimentos de qualidade, em quantidade suficiente, sem comprometer o acesso a outras necessidades essenciais, tendo como base práticas alimentares promotoras da saúde, que respeitem a diversidade cultural e que sejam ambiental, cultural, econômica e socialmente sustentáveis.
Better nutrition from agricultural biodiversity
The role of a new UNEP/FAO implemented GEF multi-country initiative to mainstream biodiversity for food and nutrition
• 35% of food imported (staple foods)
Sub-Saharan Africa

Specific Challenges

- 35% of food imported (staple foods)
- Population growth of 2.4% double the world average
- Urbanizing at greatest rate in world
- Poverty > 50%
- Undernutrition prevalence > 35%
- Increases in food prices
- Low and stagnant yields and productivity
Smallholder Farms
Sub-Saharan Africa

• Account for over 90% of agricultural production in Sub-Saharan Africa

• Primary livelihood for 65 per cent of population
  – Majority of the poor
  – Often female-headed

• 80 per cent of farms less than two hectares.
Increasing productivity

- Capital Investment
- Technology adoption
- Land consolidation

**Major Risks:**
- Ecosystem destruction
- Land tenure conflict
- Unemployment
- Resilience loss
Smallholder Farms
Sub-Saharan Africa

- Vulnerable to climate change, but potentially resilient
- Inherent stewards of agricultural biodiversity
Smallholder Farms
Sub-Saharan Africa

- Vulnerable to climate change, but potentially resilient
- Inherent stewards of agricultural biodiversity
- Culturally-acceptable (traditional) foods of high nutritional value for consumers
Marketing of African Leafy Vegetables

Kenya
Dietary fiber

Anti-giardial activity

Solanum nigrum


Local Food Systems as Transformative Models

Situating the Traditional

• Culture
  – Heritage
  – Identity
  – Norms
  – Traditional products
    • diversity
  – Traditional production
Main Points

Food consumption has biological, environmental, socio-cultural & economic components.

Market-controlled “food” systems dominated by economic considerations.

Global intensive and local (smallholder) agricultural systems essential and complementary for sustainable food and nutrition security.

Food system and market transformation positively mediated by the traditional.
Nutritional Status

Food consumption

TRADITIONAL FOOD SYSTEMS

Environment

Society, culture

Economy
Market Integration of Biodiverse Smallholder Agriculture

supported by technology adoption and market access

• offers positive benefits in productivity, environmental conservation, dietary diversity and health of consumers

• but risks for smallholder farmers
Constraints on Smallholder Market Participation

• Lack of capital and management skills
  • Input costs
• Low returns from staple foods
• Uncertain demand
• Market exclusion
  (supermarkets)
  • small suppliers
  • biodiversity
• Farmer reticence (risk aversion)
Requisites for Rejuvenation of Smallholder *biodiverse* Agriculture

• Build on inherent strengths

• Risk mediation
  • Economic
  • Social
  • Environmental

…… Farmer participation and empowerment

…… Traditional knowledge adapted *not* supplanted
Requisites for Rejuvenation of Smallholder *biodiverse* Agriculture

- Build on inherent strengths
- Risk mediation
- Direct public investment in sector
- Market oversight and regulation
Nutritional Status

Food consumption

Environment

Real costs

Environmental "footprint"

Natural resources, land

Food resources

Cost, availability

Demand

Needs, aspirations, values

Labour, knowledge, Oversight, Public investment

Income

Economy: Agriculture, Capital
Nutritional Status

Food consumption

TRADITIONAL FOOD SYSTEMS

Environment

Society, culture

Economy
“And the end of all our exploring
Will be to arrive where we started
And know the place for the first time”

Little Gidding, T.S. Eliot
Socially and Culturally-guided Decisions on Food System Policy

• Oversight and Regulation
  – Valuation of natural resources and ecosystem services
  – Value chain impacts on health and environment
    • Market access for local producers of biodiversity
  – Marketing and advertising

• Public investment
  – Systems research
  – Local and small farmer agriculture
    • Technology transfer and Infrastructure
  – Subsidies for environmental, health, social and cultural services