

# **Feasible Alternatives to Industrial Livestock Production.**

## **Organic Agriculture Perspective**



**Markus Arbenz, Executive Director of IFOAM**

## Feeding the Planet in a sustainable way Sustainable Organic Farming in Practice

1. IFOAM and Organic Agriculture (OA)
2. The challenge
3. The organic paradigm
4. Ecointensification
5. OA needs a feasible alternative to industrial livestock production

757 AFFILIATES  
115 COUNTRIES

# 40 YEARS LEADING, UNITING AND ASSISTING THE WORLDWIDE ORGANIC MOVEMENT.



BE PART OF THE GLOBAL ORGANIC  
MOVEMENT. APPLY TODAY.

IFOAM

UNITING THE ORGANIC WORLD



- Definition of Organic Agriculture
  - The 4 Principles of Organic Agriculture
  - The Scope of Organic Agriculture
  - The Family of Standards
  - IFOAM Positions
  - IFOAM Policy Briefs



# IFoAM

## POLICY BRIEF

**IFCAM POSITION PAPER**

# **IFCAM POSITION PAPER**

## THE DEFINITION OF ORGANIC AGRICULTURE

Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.



## THE PRINCIPLES OF ORGANIC AGRICULTURE

Organic Agriculture is based on the principles of health, ecology, fairness and care.

**Other terms used are:** Bio, Biological, Eco, Ecological, Agroecological Farming, Low Input Agriculture, Sustainable Agriculture, Natural Farming, Biodynamic, Permaculture etc.

Some of these terms are legally protected, usually for a defined range of products, in some countries



## That's Organic - Worldwide.



### **IFOAM** IFOAM Standard

International Standard for Forest Garden Products (FGP)



- Tunisia Organic Regulation*
- East African Organic Products Standard*
- EnCert Organic Standards, Kenya*
- Basic Norms of Organic Agriculture in Senegal, Senegal
- Afrisco Standards for Organic Production, South Africa
- Siyavuna Organic Standards, South Africa
- Organic Standards for Tancert, Tanzania
- Uganda Organic Standard, Uganda



- Saudi Arabia Organic Regulation*
- China Organic Regulation*
- India Organic Regulation*
- Israel Organic Regulation*

**Note:** Applicant standards are marked in grey.

### *Japan Organic Regulation*

- OFDC Organic Certification Standard, China
- Hong Kong Organic Resource Center Standard, Hong Kong
- IBOAA Organic Agriculture Standard, Israel
- Japan Organic & Natural Foods Association Organic Standard, Japan
- MASIPAG Organic Standards, The Philippines
- CONU Organic Standard, South Korea
- DCOK, LLC International Standards, South Korea
- GOAA International Standards, South Korea
- ACT Basic Standard, Thailand
- Vietnam PGS Standards, Vietnam



### *National Standard for Organic and Bio-Dynamic Produce, Australia*

- New Zealand Organic Export Regulation*
- Pacific Organic Standard, Pacific Community*
- Australian Certified Organic Standard, Australia
- NASAA Organic Standard, Australia
- AsureQuality Organic Standard, New Zealand
- BioGro Organic Standards, New Zealand

Family Standards Frame: March 15, 2012.



### *EU Organic Regulation*

- Switzerland Organic Regulation*
- Turkey Organic Regulation*



### **Bio Suisse Standards, Switzerland**

- Organska Kontrola Standards for production and processing, Bosnia and Herzegovina
- Biocyclic Standards, Cyprus
- Nature & Progrès Standards, France
- BioPark Guidelines for Organic Production and Processing, Germany
- Ecoland Standards for Organic Agriculture and Food Production, Germany
- Ecowellness Standard, Germany
- Gäa Private Standards, Germany
- Naturland Standards, Germany
- CCPB Global Standard, Italy
- Italian Organic Standard, Italy
- Krav Standards, Sweden



### *SOUTH AMERICA*

- Argentina Organic Regulation*
- Costa Rica Organic Regulation*
- Argencert Organic Standard, Argentina*

Click on each standard to see more details.

LETIS IFOAM Standard, Argentina

OIA Organic Standards, Argentina

Bolicert Organic Standard for Production and Handling, Bolivia

Guidelines for the IBD Quality Organic Standard, Brazil



### *Canada Organic Regulation*

### *USA Organic Regulation*

DOAM Organic Standards, Dominica

Red Mexicana de Tianguis y Mercados Orgánicos' Standard, Mexico

CCOF Global Market Access Standard, USA

Farm Verified Organic Requirements Manual, USA

NOFA Standards for Organic Land Care, USA

QCS Int. Program Standard Manual, USA

**THE FAMILY OF STANDARDS** contains all standards officially endorsed as organic by the Organic Movement, based on their equivalence with the Common Objectives and Requirements of Organic Standards. Both private standards and government regulations are admissible.

[www.ifoam.org/ogs](http://www.ifoam.org/ogs)

Our Campaigns:

Biodiversity:  
PowerbyNature

Food Security:  
People Before Commodities

Climate Change:  
Not Just Carbon

## THE ORGANIC MOVEMENT CAMPAIGNS FOR THE ORGANIC ALTERNATIVE

*ADDRESSING*

POVERTY AND HUNGER. CLIMATE CHANGE.  
GENETIC DIVERSITY LOSS. ECOCIDE. LAND GRABBING.



*OPENING*

OPPORTUNITIES FOR THE ORGANIC WORLD.



Ecuador : The Ayme family of Tingo  
Food expenditure for one week: \$31.55



Egypt : The Ahmed family of Cairo

Food expenditure for one week: 387.85 Egyptian Pounds or \$68.53



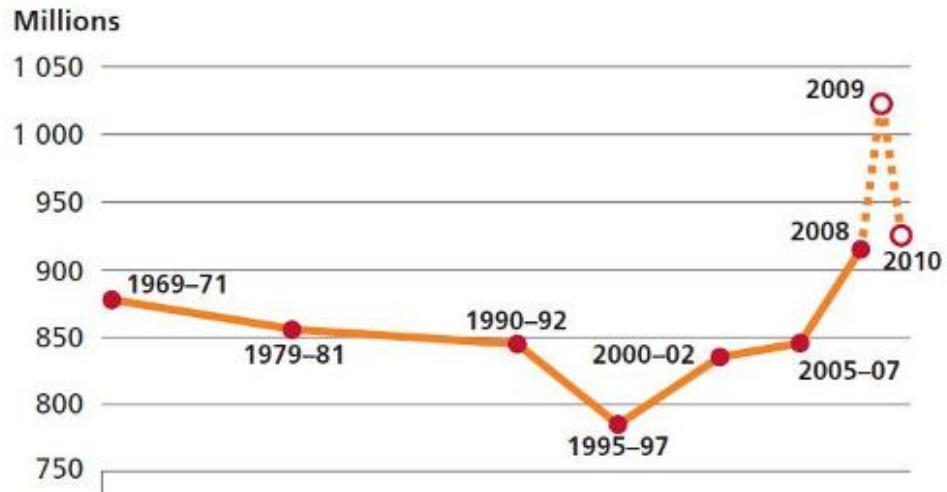
United States : The Revis family of North Carolina  
Food expenditure for one week \$341.98



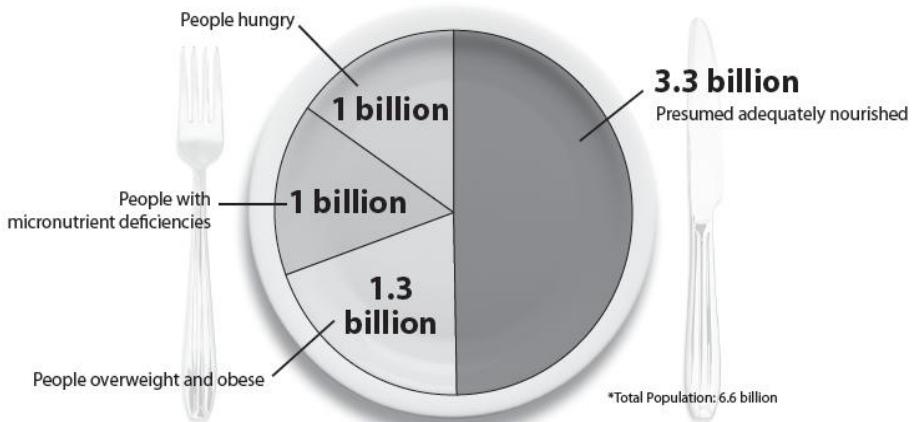


# Food security

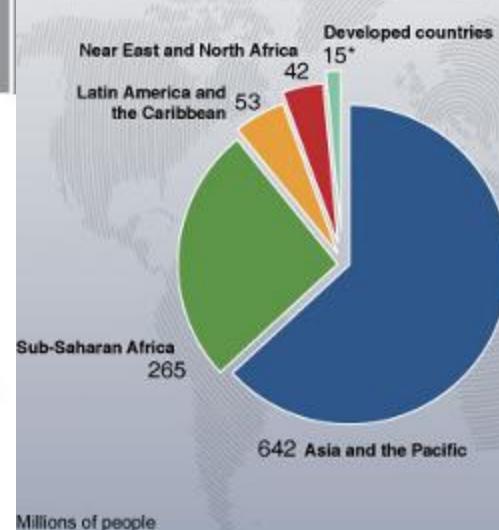
Number of undernourished people in the world,  
1969–71 to 2010



At Least Half of the World's Population is Badly Served  
by Today's Food Production Systems\*



More than 1.02 billion hungry people

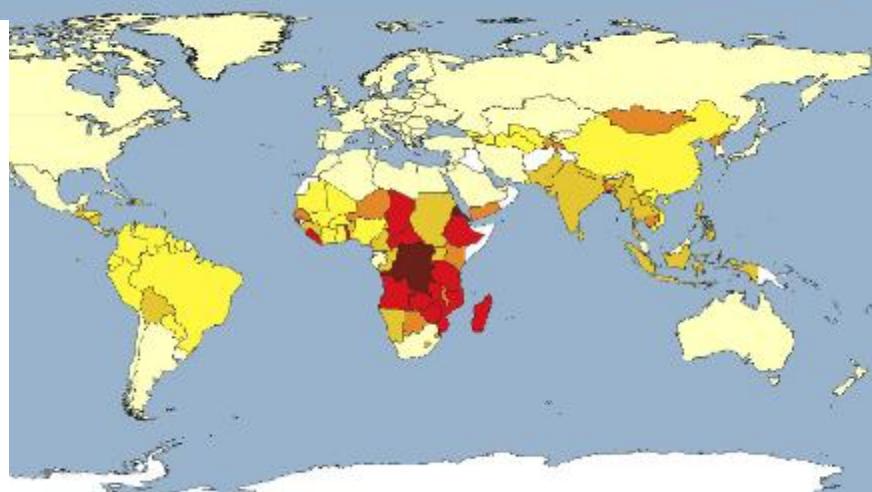


FAO estimates that 1.02 billion people are undernourished worldwide in 2009. These are more hungry people than at any time since 1970, the earliest year for which comparable statistics are available.

Hunger has increased not as a result of poor harvests but because of high domestic food prices, lower incomes and increasing unemployment due to the global economic crisis. Many poor people cannot afford to buy the food they need.

The chart on the left shows where the world's hungry people live.

- ▶ Hunger at a glance
- ▶ Policy brief
- ▶ More graphs



Note: This map shows the prevalence of undernourishment in 102 developing countries in the world. It uses statistics covering the period from 2004-2006, based on FAO's flagship publication *The State of Food Insecurity in the World 2009*. For more information, visit: [www.ifoam.org/publications/sofi](http://www.ifoam.org/publications/sofi)

## Facts and figures

- The world produces 125% of its need on calories
- Nevertheless 1 Billion hungry people which are predominately the rural poor
- The world will need to produce 70 percent more food for an additional 2.3 billion people by 2050 while at the same time combating poverty and hunger, using scarce natural resources more efficiently and adapting to climate change.
- By 2050, the demand for livestock products will double.
- Resources and technology for production increases are available, but not so the political willingness to ensure access to natural resources or income for all.
- 75% of the poor live in rural areas and depend on agriculture, 70% of present global food supplies come from smallholding family farms

## The main Food Security issues and debates

- Worsening ToT for farmers and the global south and volatile prices
- Agofuels
- Land grabbing
- Losses, waste and inefficient livestock production
- Oil and P-peak
- R & D and Extension in Agriculture decreasing and shifted from Governments' to private investments
- Concentration of companies controlling seed, fertilizers and pesticides
- Multi-functionality of agriculture and ecosystem services neglected

## Livestock challenges

- Sharp increase of demand through more wealth and change of habits
- Inefficiency of livestock products
- Climate footprint (Methane, fodder transports, but also land use changes)
- External effects (positive and negative) not part of the value chain system
- Livestock a scapegoat for many ecological and ethical challenges, however no clear divide between livestock systems in the perception of people
- The social dimension: 500 Million poor depend on livestock alone.

# Total Grain Supply Distribution



A black and white photograph showing two large, cylindrical grain silos against a cloudy sky. The silo on the left is covered in a protective mesh and has a metal ladder leaning against its side. The silo on the right is made of concrete and also has a metal ladder. The text "60% Human Consumption" is overlaid on the left side of the image.

**60%**  
**Human  
Consumption**

Nearly 40% of our global grain supply feeds animals. Some 650 million tonnes of grain – nearly 40% of global production – is fed to livestock. That amount of grain is equivalent to the annual calorie needs of more than 3.5 billion people.



A black and white photograph showing two large, cylindrical grain silos against a cloudy sky. The silo on the left is covered in a protective mesh and has a metal ladder leaning against its side. The silo on the right is made of concrete and also has a metal ladder. The text "40% Fed to Livestock" is overlaid on the right side of the image.

**40%**  
**Fed to  
Livestock**

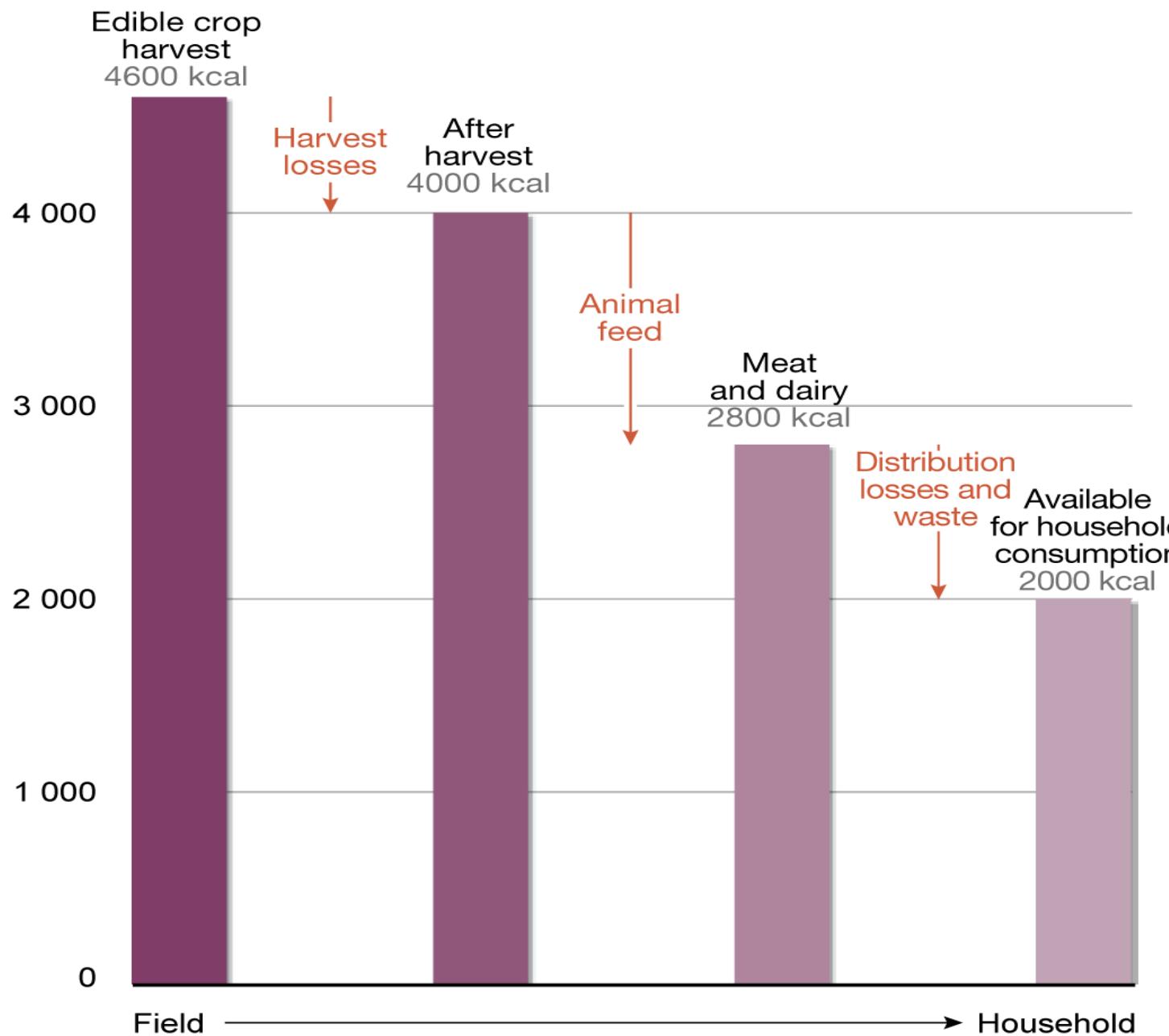
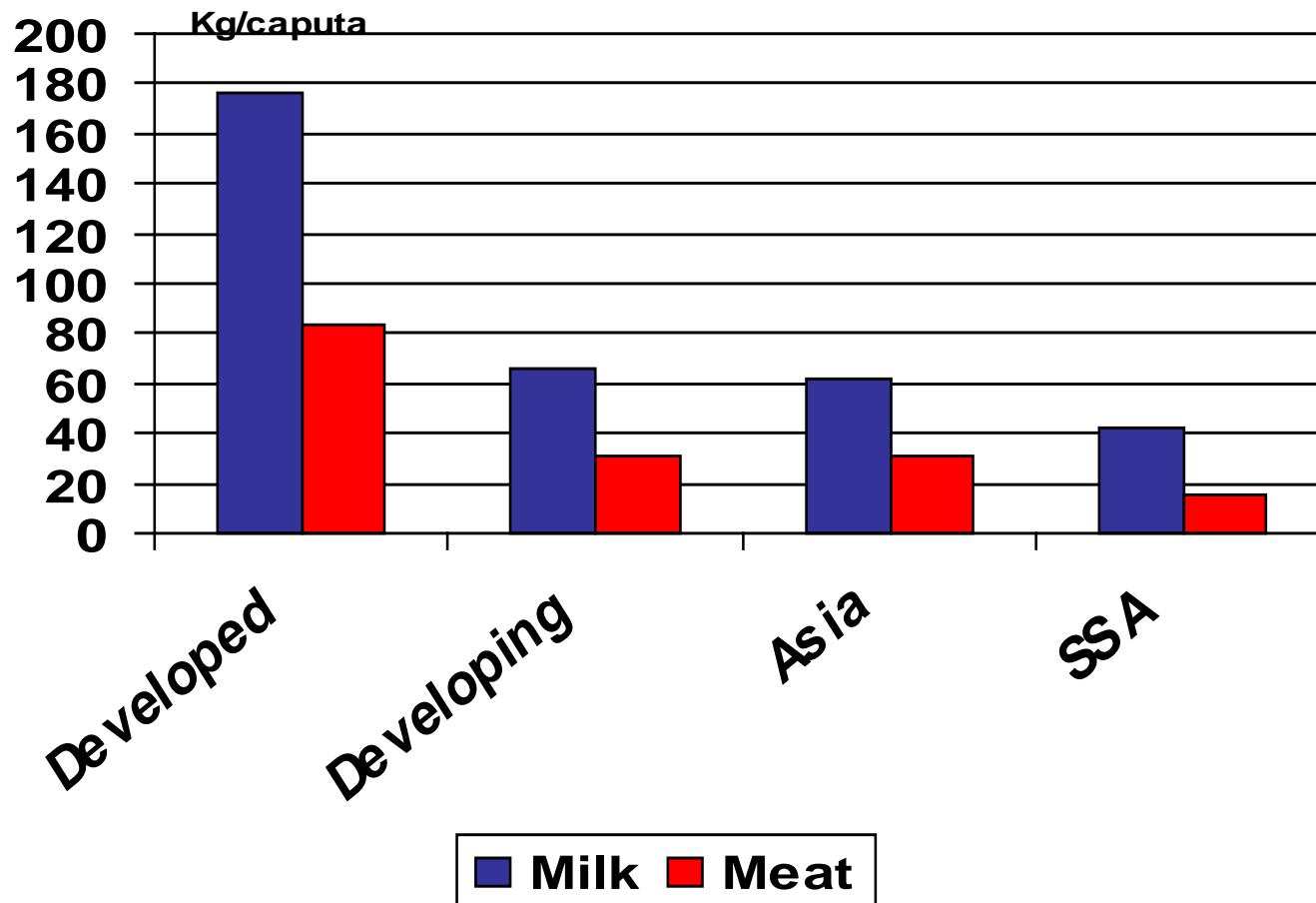


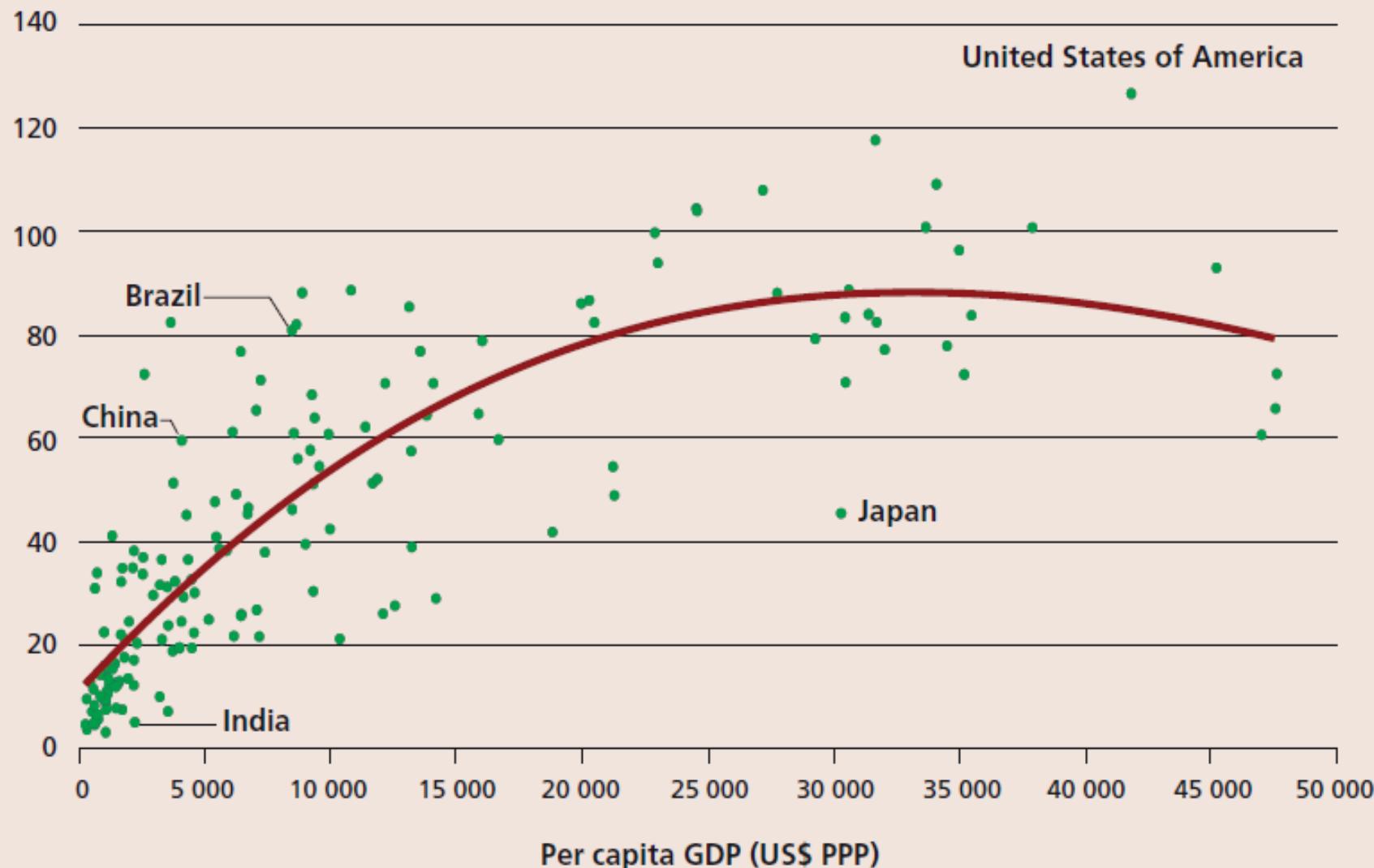
Figure 12: A gross estimate of the global picture of losses, conversion and wastage at different stages of the food supply chain.

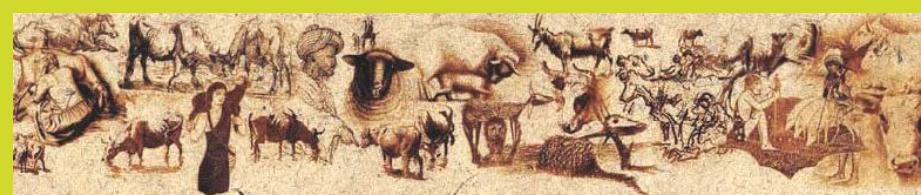
## Meat consumption



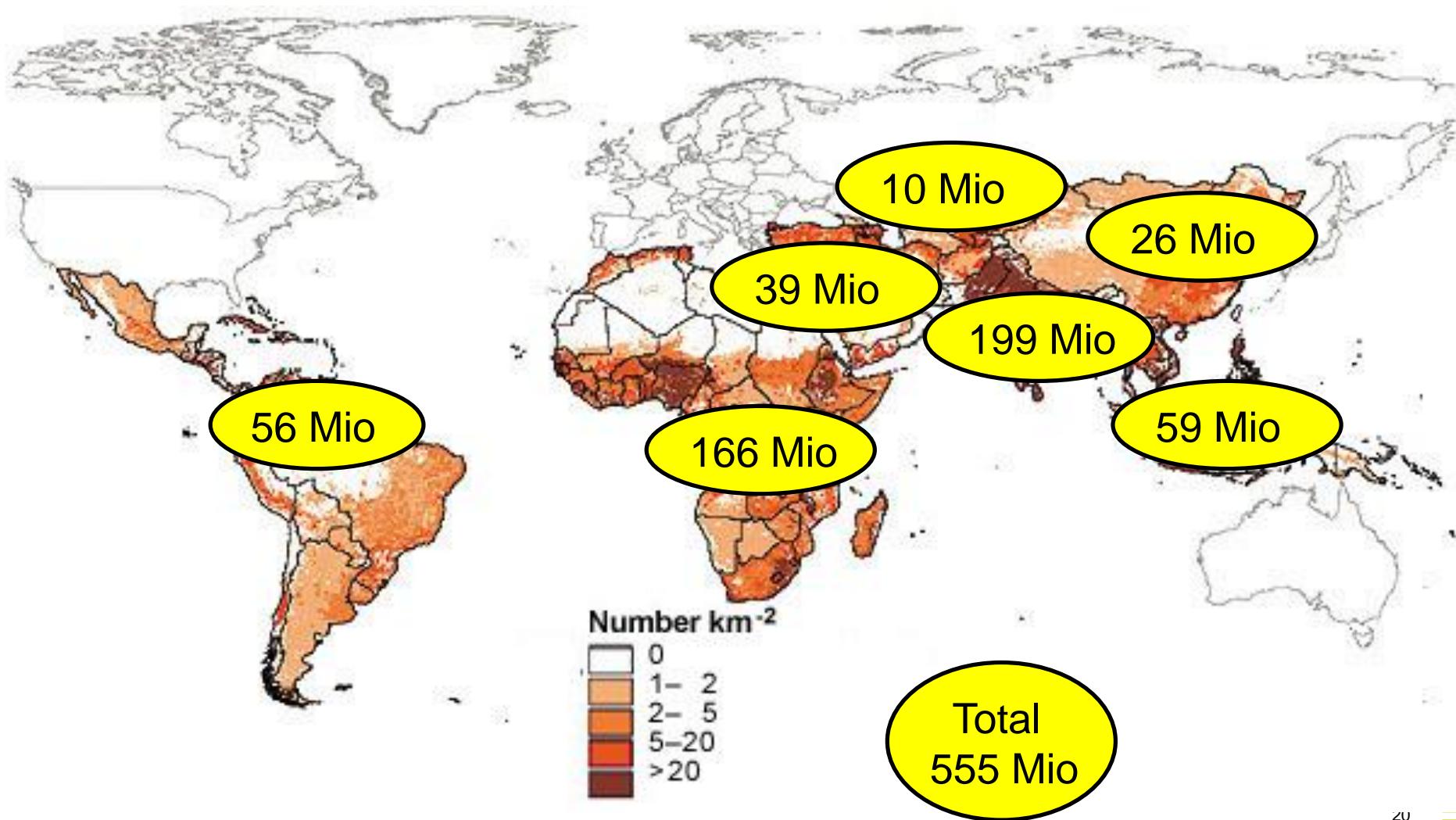
## Per capita GDP and meat consumption by country, 2005

Per capita meat consumption (kg/year)





## Dichte arme Tierhalter (bezogen auf die Produktionssysteme)





*Business as usual is not an option any more....*

*Continuing to focus on production alone will undermine our agricultural capital and leave us with an increasingly degraded and divided planet*

Prof. Bob Watson, Director IAASTD

# OA offers the world an alternative to address global challenges



Food security  
Climate change mitigation/adaptation  
Biodiversity conservation  
Sustainable natural resources (water, soil)





*While organic agriculture contributes to hunger and poverty reduction and should be promoted, it cannot by itself feed the rapidly growing population.*

J. Diouf, 2009 (FAO Director-General)

**Biofach special theme: Food security**

A solid red diagonal bar extending from the bottom-left towards the top-right.

**Yes, organic can  
feed the world!**

# Ecointensification: the new paradigm for the 21st century

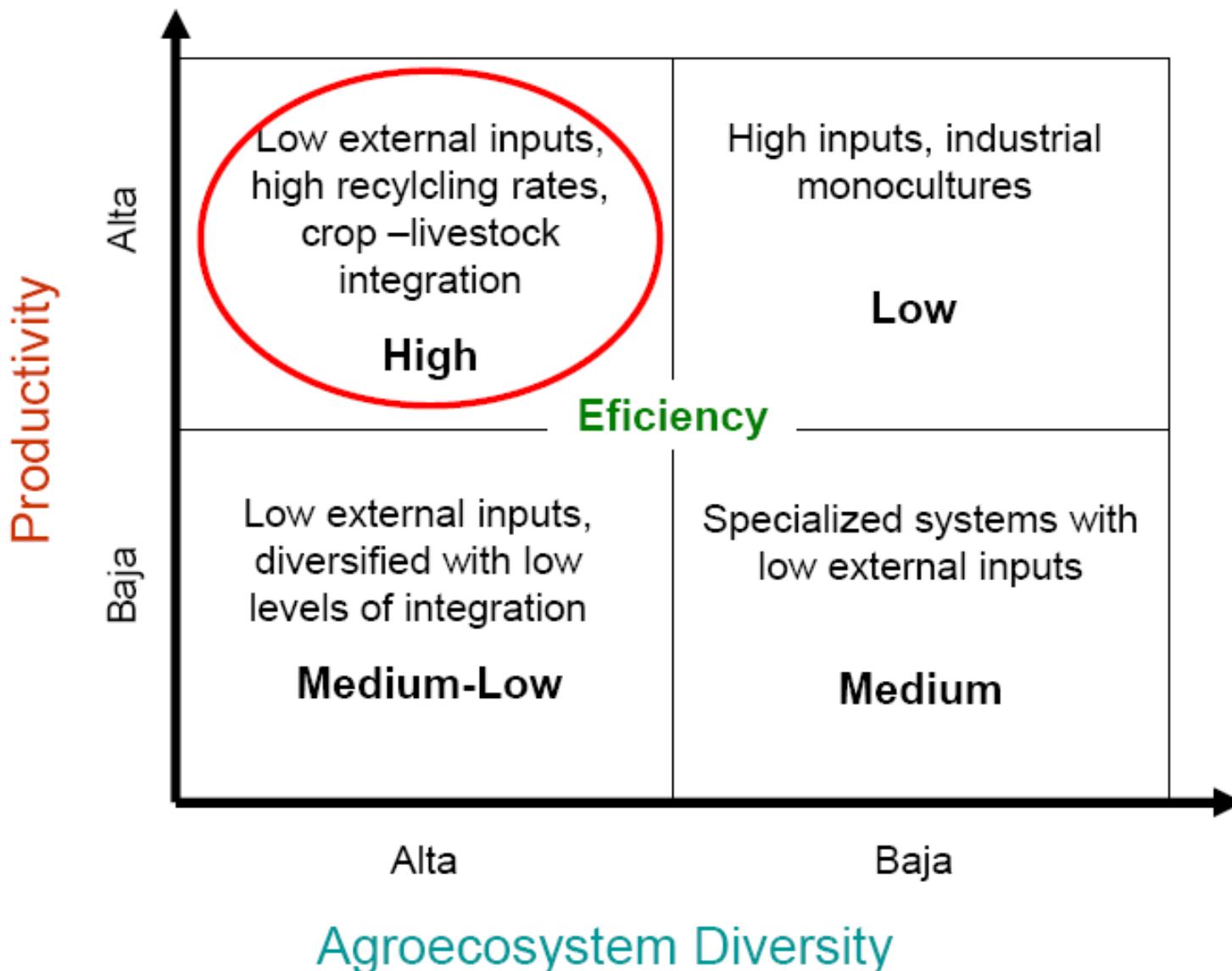
More production on the same land, but based on ecological processes not on agro industrial inputs

**poweredbynature**



- Organic farming optimizes system performance through the intensification of ecological knowledge, ecological practices and ecological functions rather than through intensification of finance, chemicals, energy and waste
- Organic farming builds the resilience of the farm itself rather than outsourcing resilience to companies through the purchase of fossil fuel intensive chemical inputs

# The goal is high efficiency thanks to Biodiversity





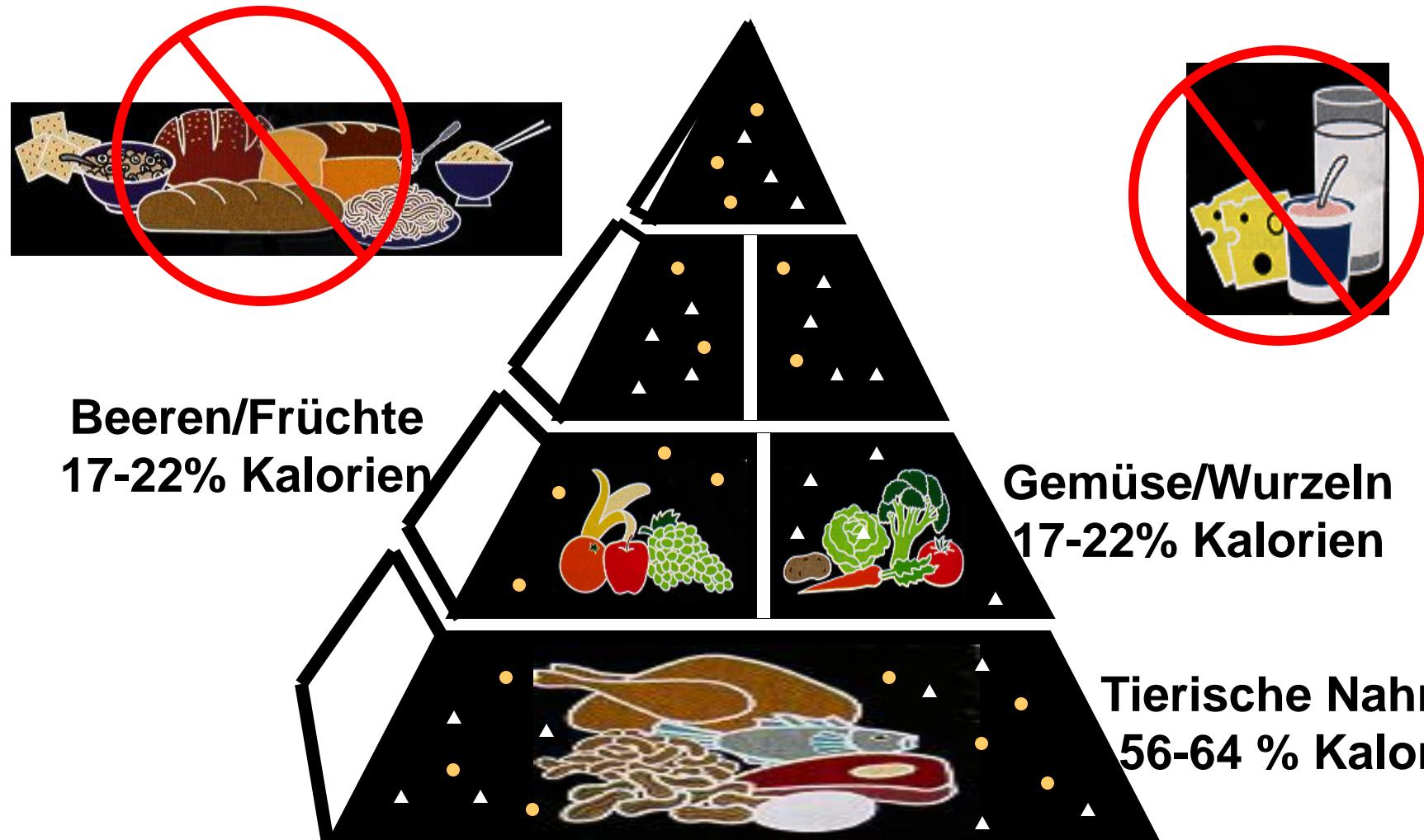
Milk and meat of industrial livestock keeping is cheaper on short term only

## 5. Sündenbock Livestock\*

- 70% of agricultural land is grassland
- Its importance is mostly underestimated
- 30% of global carbon is stored in the soils of grasslands
- More than 30% of greenhouse gas emissions come from land use change
- E.g. Turning prairie soils in the US into monoculture crops caused on average 25% loss of topsoil and soil carbon.

Bauernhof im Entlebuch

# DIE EVOLUTIONÄRE ERNÄHRUNG DES MENSCHEN



Cordain et al. Plant-animal subsistence ratios and macronutrient energy estimations  
In worldwide hunter-gatherer diets. Am J Clin Nutr 2000;71:682-692

## The Organic Movement needs the Livestock Alternative

- Combat hunger without livestock is not possible. OA is people, not production centered.
- Animals are crucial for nutrient cycles
- It is natural to consume Livestock produces
- OA is demand driven and bases production on the 4 organic principles
- Animal welfare is part of the organic principles
- We have to name the feasible alternative to Industrial Livestock Production

**Thank you for your attention**

**Build in animal husbandry  
into the crop production  
system**





An aerial photograph of a rural landscape. The foreground is dominated by several large, vibrant green agricultural fields. These fields are intersected by a network of dark brown dirt roads that form a grid-like pattern. In the center-left of the image, there is a prominent, irregularly shaped area covered in dense, low-lying green shrubs or bushes. The background shows more fields extending towards the horizon, where a body of water is visible. The overall scene illustrates a mix of cultivated land and natural vegetation.

# Example 1: Diversity in the landscape

## Example 2: Greening the Desert (Egypt)



The first SEKEM building in 1979



The same building in 2009



A SEKEM field in 1987

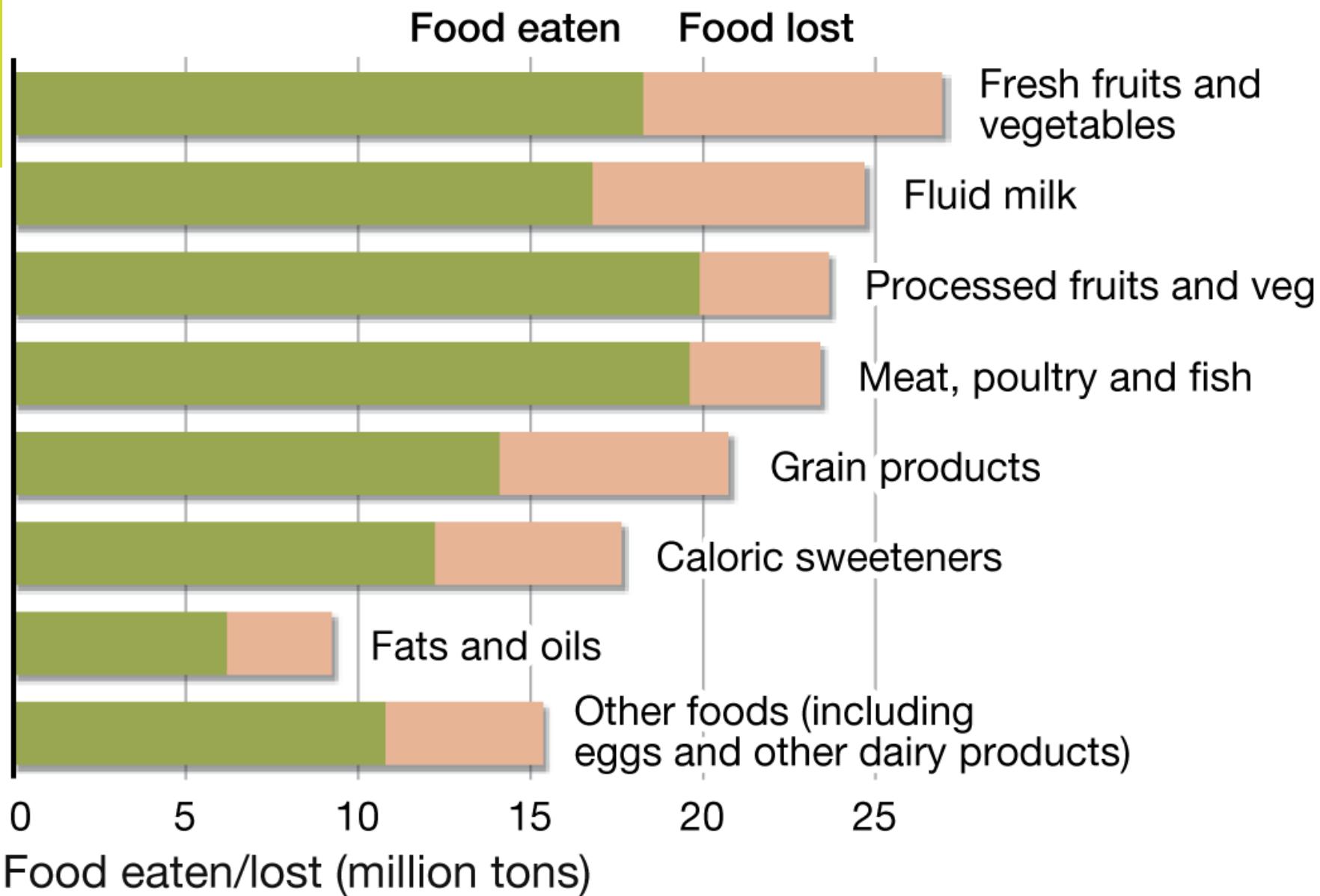


The same fields in 2009



# Trends in Konsum, Produktion und Handel von Nutztieren und Tierprodukten

- Der Anteil tierischer Produkte in der Ernährung von Menschen in den Entwicklungsländern nimmt stetig zu durch
- Einkommenswachstum
- Urbanisierung
- Bevölkerungswachstum und Bevölkerungsstruktur
- Tierproduktion verschiebt sich von Industrieregionen in Entwicklungsregionen



**Figure 11: Food losses for different commodities.**  
(Source: Kantor *et al.*, 1999).

## Treibende Kräfte des Wandels im Agrar- und Nutztierbereich

- Der Nutztierbereich innerhalb des Agrarsektors ist sehr dynamisch
- Nutztiere beanspruchen
  - 60 % der gesamten landwirtschaftlichen Nutzfläche der Erde
  - 30 % der Erdoberfläche
  - 33 % der Ackerfläche der Welt für die Produktion von Tierfutter
- Nutztiere sind verantwortlich für 18 % der anthropogenen Treibhausgase

## Treibende Kräfte des Wandels im Agrar- und Nutztierbereich

- **Eine Milliarde Bäuerinnen und Bauern** sind für ihr Einkommen und ihre Ernährung mindestens teilweise von Nutztieren abhängig
- **Mehr als 500 Millionen der Armen** dieser Welt (ca. die Hälfte aller Armen) ernähren sich und erwirtschaften ihr unzureichendes Einkommen **vollständig durch Nutztiere**

## Treibende Kräfte des Wandels im Agrar- und Nutztierbereich

- Durch steigende Einkommen in der Mittel- und Oberschicht und **sinkende Nahrungsmittelpreise** haben sich die Essgewohnheiten in den letzten 40 Jahren in den Entwicklungsländern verändert:
  - weniger pflanzliche Grundnahrungsmittel
  - mehr Milch, Fleisch, Früchte, Gemüse (teurere Nahrungsmittel)
  - mehr verarbeitete Nahrungsmittel (zum Beispiel Fertigpizza in Indien)

# Antworten und Follow-up

## Ein strategisches Prinzip

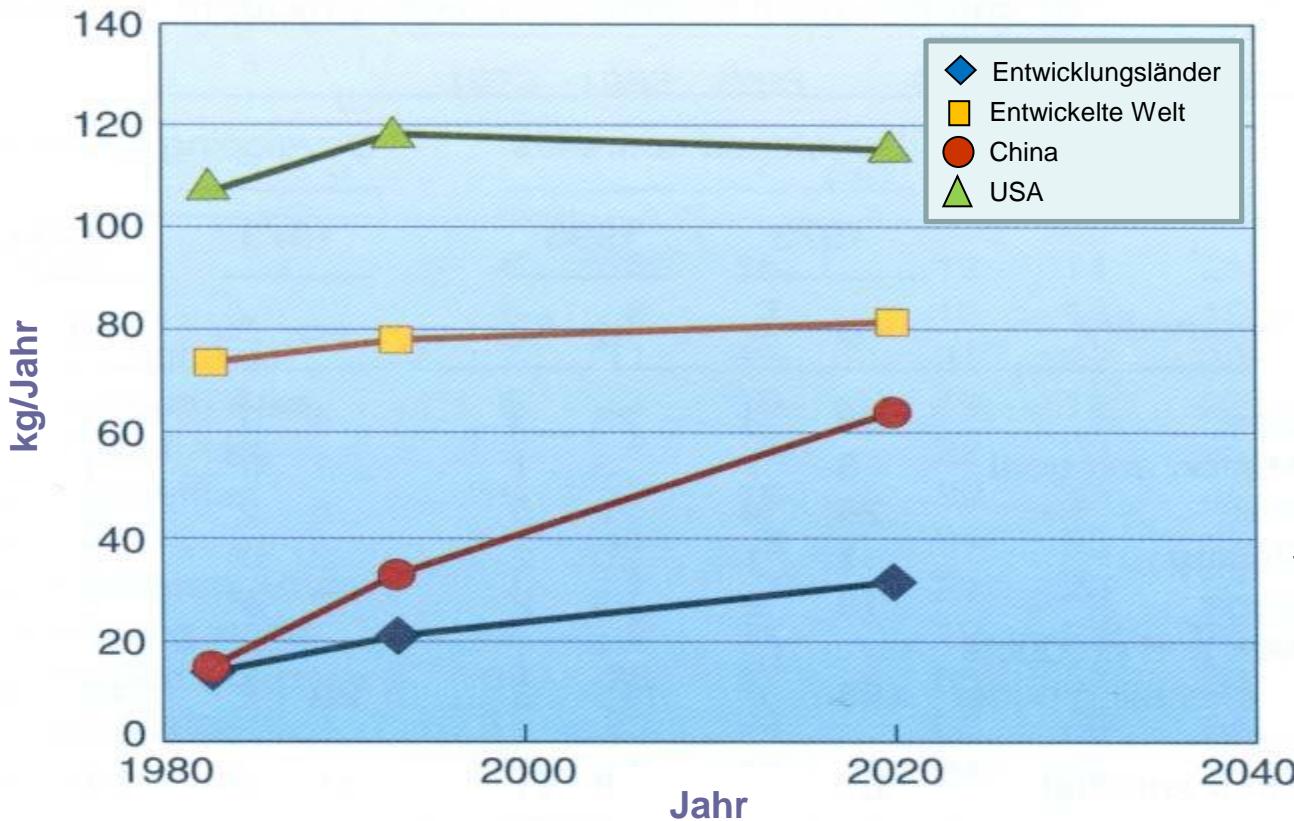
### Intensivierung ist notwendig

- Mittelfristig können nur intensive Systeme („intensivere“) die wachsende urbane Bevölkerung ernähren
- Intensivierung reduziert die Menge der benötigten Ressourcen und produzierten Emission pro Einheit Produkt
- Intensivierung erleichtert die Regulierung in Richtung Null-Emissionen
- **Also: Intensivieren aber nicht konzentrieren**
  - Suche nach effizienter Ressourcennutzung

# Vier Prinzipien (für die Nutztierpolitik)

- **Gerechte Preise** : Ineffiziente Ressourcennutzung, erhöht oft die Nutzung und führt zu Fehlallokation von Ressourcen zwischen konkurrierenden Nutzungen (innerhalb und ausserhalb der Landwirtschaft)
  - Anwendung von "**Verschmutzer bezahlt, Erbringer von ökologischen Leistungen wird bezahlt**" Prinzipien
  - Anstreben einer guten Ökobilanz: Nutztiere ins Gleichgewicht zum umliegenden Land bringen (AWI)
  - Die Nutztierbranche muss die Nachhaltigkeit selber vorantreiben, muss Vorreiterrolle spielen
- **Erkennen und abstimmen von verschiedenen Zielen**

# Fleischkonsum pro Person (kg/ year)

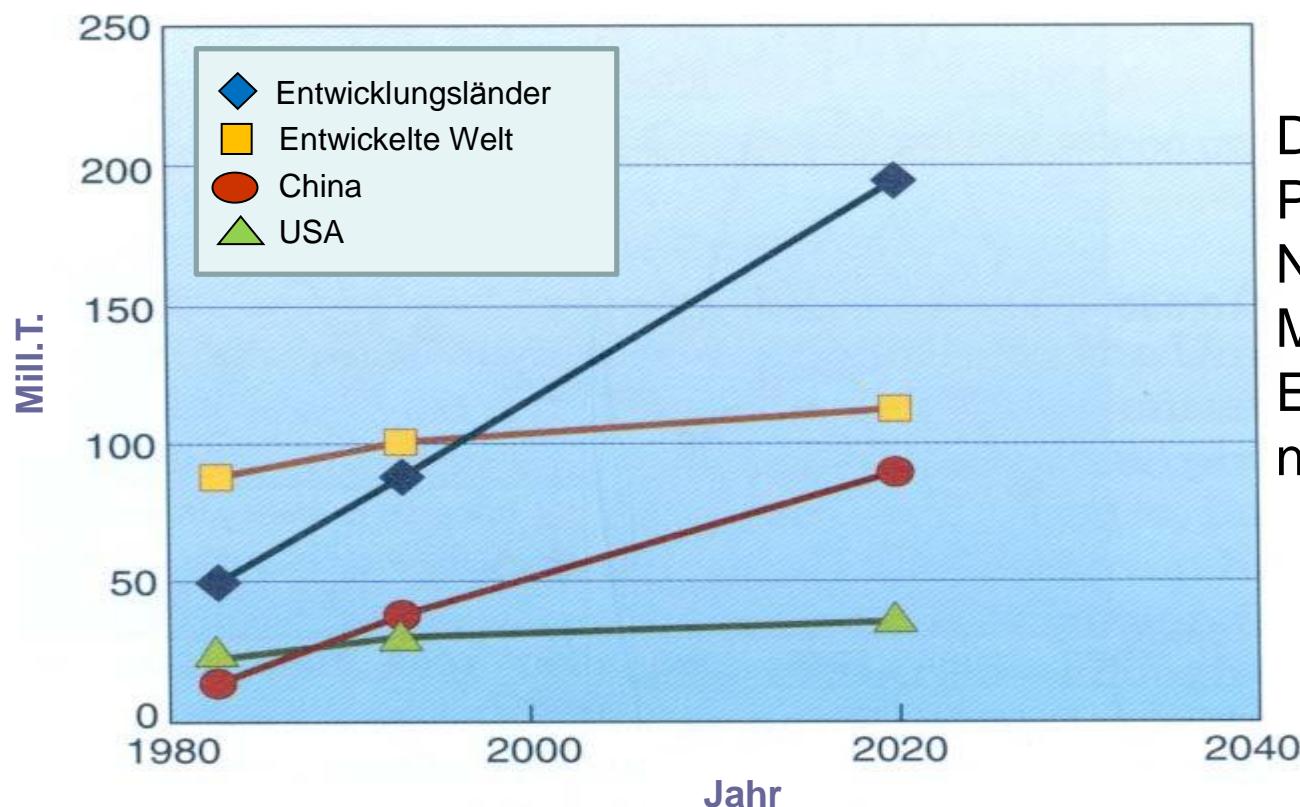


Der Anteil tierischer Produkte in der Nahrung von Menschen in den Entwicklungsländern nimmt stetig zu.

Durchschnitt weltweit: 39 kg /P/J

Source: FAO data reported in Delgado et al., 1999.

# Gesamter Fleischkonsum (mio. Tonnen)



Der Anteil tierischer Produkte in der Nahrung der Menschen in den Entwicklungsländern nimmt stetig zu.

Source: FAO data reported in Delgado et al., 1999