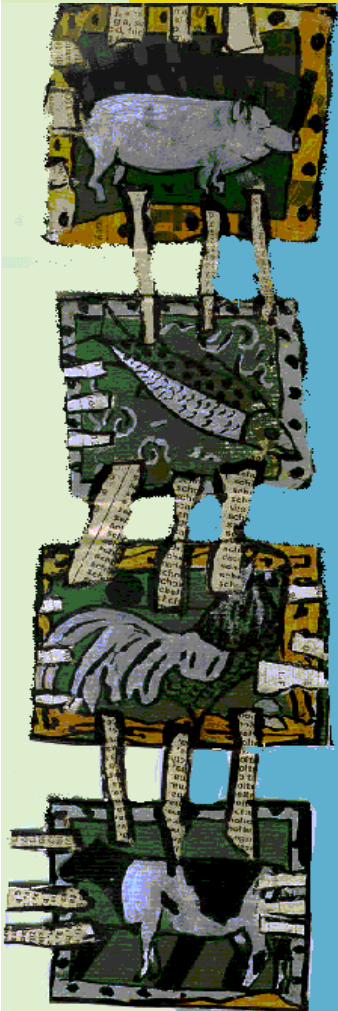


# Ethical and Social Aspects of Farm Animal Genomics

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European Forum of Farm Animal Breeders (*EFFAB*)  
*ECB12 2005*



# EFFAB

[www.effab.org](http://www.effab.org)

- n Forum of European farm animal breeding and reproduction organisations (cooperative, industry)
- n Species: ruminants, pigs, poultry, farmed fish
- n Established in 1995
- n 34 members in 13 countries
- n GOALS:
  - Stimulate & give directions EU research
  - Promote industry-academia interaction
  - Explain breeding to wider audience



# Lay out of contribution

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- n Farm animal breeding
- n Five projects:
  - Farm Animal Breeding & Society (ELSA)
  - Sustainable Farm Animal Breeding And Reproduction (SEFABAR)
  - Code-EFABAR
  - EADGENE
  - FABRE Technology Platform
- n Implications for GENOMICS in farm animals

# Farm Animal Breeding

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## n **Business:**

- Improve genetic make-up of food producing animals
  - Cumulative
  - Permanent
  - Disseminated widely

## n **Structure:**

- “Few” organisations operating world wide
- Populations, not clones
- No animal breeder’s rights

## n **Europe world leader**

# Farm Animals: Breeding vs Production

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**GOAL breeding:** improve **genetic make-up** of farm animals with regard to economics of production and marketing of farm animal products (meat, eggs, milk and fish)

**GOAL production:** to produce food of animal origin at a competitive (and market directed) price and quality level

# Farm Animal Breeding

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Sensitive area, concerning:

**Animals**

**Food**

**Genes**

Pro-active:

**Animal breeders**

**addressing issues**

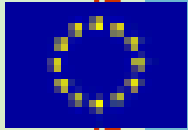
**concerning society and ethics**

# Five projects

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- n Farm Animal Breeding & Society (ELSA)\*
- n Sustainable Farm Animal Breeding And Reproduction (SEFABAR)\*
- n Code-EFABAR\*
- n EADGENE\*
- n FABRE Technology Platform

\* EU funded: Framework Programmes for RTD 4, 5 and 6

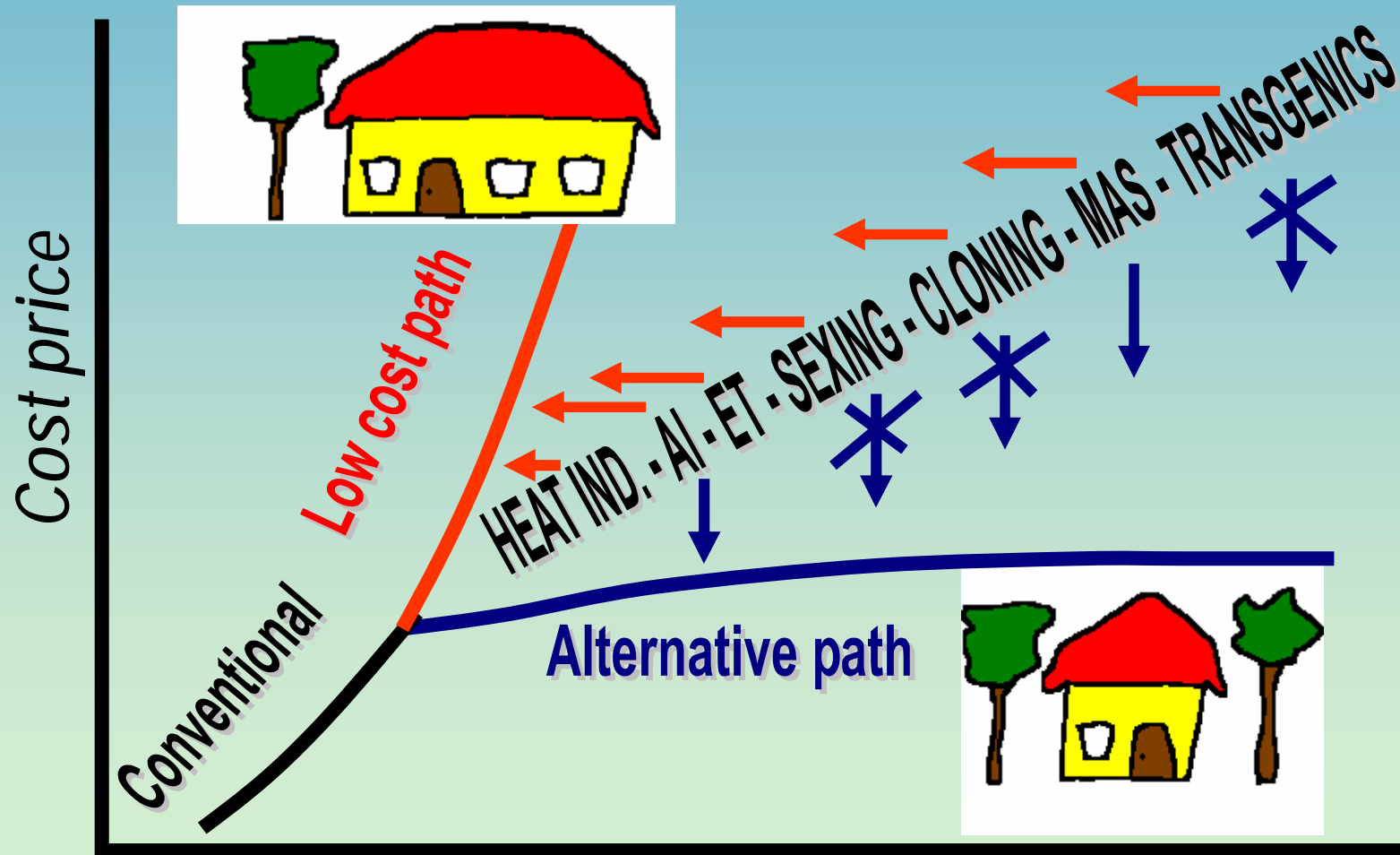


# 1. ELSA

- 1998-1999
- EFFAB and social partners (ethics, law, consumers)
- **GOAL:**
  - Picture farm animal breeding
  - Ethical, consumer and legal aspects
  - Dialogue and discussion
  - Information for policy makers



# ELSA Breeding and Reproduction



# ELSA Ethics, Law and Consumers

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## n ANIMAL WELFARE:

- Major concern
- Open dialogue with welfare organisations
- Animal welfare legislation will influence future breeding work

## n INTELLECTUAL PROPERTY:

- Broad patent claims should be watched

## n SOCIETY

- Call for **transparency and dialogue**
- Take **concerns** societal groups serious



## 2. SEFABAR

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- 2000-2003
- Network scientists / industry & social partners (ethics, welfare, cultural differences, public opinion, economy)
- **GOAL:**
  - What is sustainable breeding and reproduction ?
  - Sustainable breeding scenarios
  - Socio-economic studies
  - Integration
  - Information policy makers

# SEFABAR: Breeding and Reproduction

- n **Sustainability**: the extent to which animal breeding and reproduction (as managed by professional organisations) contribute to maintenance and good care of animal genetic resources for future generations
- n **Breeding scenarios: Tool for communication**
  - Quality
  - Animal Health
  - Animal Welfare
  - Environment
  - Biodiversity



# SEFABAR: Society partners

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- n Knowledge / application welfare regulations should be improved
- n Breeding and society: **two cultures**
- n **Technology** associated with **risk**  
although also **solution** for  
safety/quality/health
- n Sustainability is a **process**, not a no/yes  
issue

# SEFABAR

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- n We are faced with **dilemmas**. Society accepts choices when you are able to explain your decisions and **communicate** about them
- n Hiding away of issues and covering up about problems represents no **viable long-term strategy**:
  - Further dialogue desired
  - Breeders/producers should be **transparent**

# SEFABAR: evaluation

## n **IMPORTANT: be pro-active**

- Awareness building
- Dialogue with stakeholders and society
- Transparency

**and exercise this**

## **BOTH**

In research and industry

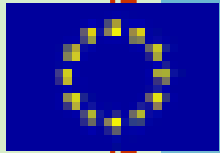
## **WHY?**

License to produce

Explain our aims and ways of working

Bridge gap citizens – food production





## Application in industry:

# 3. Code EFABAR ®

- 2004-2005
- EFFAB + social partners (ethics, communication, certification)
- **GOAL:**
  - Become standard Code of Good Practice Breeding
  - Voluntary
  - Can be implemented in running management systems
  - Complementary to existing legislations to existing Codes GP
  - Information to public/stakeholder
  - Update every 2 years (EFFAB responsible)





# Code EFABAR ® (2)

## § Introduction

- § Transparency
- § Dialogue

## § Body

- § Sustainability (SEFABAR)
- § Technologies

## Guide for implementation

- § Species codes
- § Definitions
- § Certification guidelines
- § Ethical report
- § Communication report

ECB12 2005



# Code EFABAR ® (3)

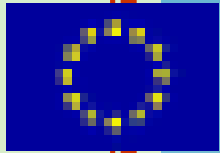
n **Launch** by breeding organisations  
**December 2005**

n **Information material**

- For general public and for breeding organisations in 20 languages

**[WWW.CODE-EFABAR.ORG](http://WWW.CODE-EFABAR.ORG)**





# Awareness in research:

## 4. EADGENE

- 2004-2009
- INRA + 11 research organisations + EFFAB (+ethicist) Network of Excellence
- European Animal Disease Genomics Network of Excellence for Food Safety



**Major input ethics and sociology**

- **Society – animal disease genomics**
- **The role of the scientist**
- **Facilitate ethical discussions in the network**

# Public perception on animal diseases and genes

## *Positive*

- n Animal resistance to diseases!
- n Reduction of medicines
- n Avoidance mass eradication
- n Improved product safety and quality

## *Negative*

- n Genes cause reluctance
- n Usefulness and efficiency in identifying diseases are not enough for social acceptability

# Causes

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- n Genes not considered as ordinary part of the living organism
- n Intervention in animal's bodies
- n Risk perception (influenced by culture and status)
- n Attitude to new discoveries in animal hygiene and science
- n Crisis (e.g. BSE): critical and concerned

# Metalinguage

scientist

consumer

**Rational view**

**Gene as a category:  
gene ↔ living body  
organism**

**?**

**Idealised view**

**Idea influenced by  
perception of genes  
and genetics**

## **EADGENE:**

**SCIENTISTS BUILD AWARENESS AND LEARN TO  
COMMUNICATE/DISCUSS**

## 5. FABRE Technology Platform (1)

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- n **Technology Platform** = group of stakeholders around a topic (e.g. animal breeding) in which research is an important part for future European (global) businesses
- n **FABRE Technology Platform** = organisations with interest in farm animal breeding

# 5. FABRE Technology Platform (2)

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## n Aims:

- Write a vision paper with:
  - Opportunities and challenges in farm animal breeding for the next 15-20 years
  - Research agenda (a.o. genomics)
- Make an implementation plan

## n Time Plan:

- Draft vision paper ready September 2005
- Stakeholder discussion meeting November 2005
- Vision paper and launch December 2005
- Implementation: as from 2006



## 5. FABRE Technology Platform (3)

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### n Characteristics:

- Industry initiative (so that it will strengthen European business)
- Research organisations closely involved
- Seeking wide stakeholder involvement, also NGOs, policy makers (legal, research, agriculture/aquaculture), funding bodies

# 5. FABRE Technology Platform (1)

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- n The aim of FABRE TP is for the research agenda to be included in the European and national funding schemes
  
- n Therefore, it is important
  - To take into account lessons learned in previous years
  - with continuing input from wide range of stakeholders:
    - Science
    - Industry
    - NGOs: farmers' organisations, society organisations...

[www.fabretp.org](http://www.fabretp.org)

# 5. FABRE Technology Platform (1)

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- n Opportunities and challenges in farm animal breeding
- n A.o. genomics
- n Industry initiative
- n Taking into account lessons learned in previous years with continuing input from wide range of stakeholders:
  - Science
  - Industry
  - NGOs: farmers' organisations, society organisations...

[www.fabretp.org](http://www.fabretp.org)

# Implications for genomics in farm animals

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Society is concerned about:

- Food
- Animal welfare
- Safety
- Health
- New technology
- Science
- Industry

These elements are all present in genomics for farm animals



Continuation of pro-active initiatives from research and industry

# *Thank you for your attention*



**EFFAB**



[www.EFFAB.org](http://www.EFFAB.org)

[www.CODE-EFABAR.org](http://www.CODE-EFABAR.org)

[www.EADGENE.org/info](http://www.EADGENE.org/info)