



# Current and past practices of models and standards in the use of AnGR and in ABS agreements in research and breeding.

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9th December 2010

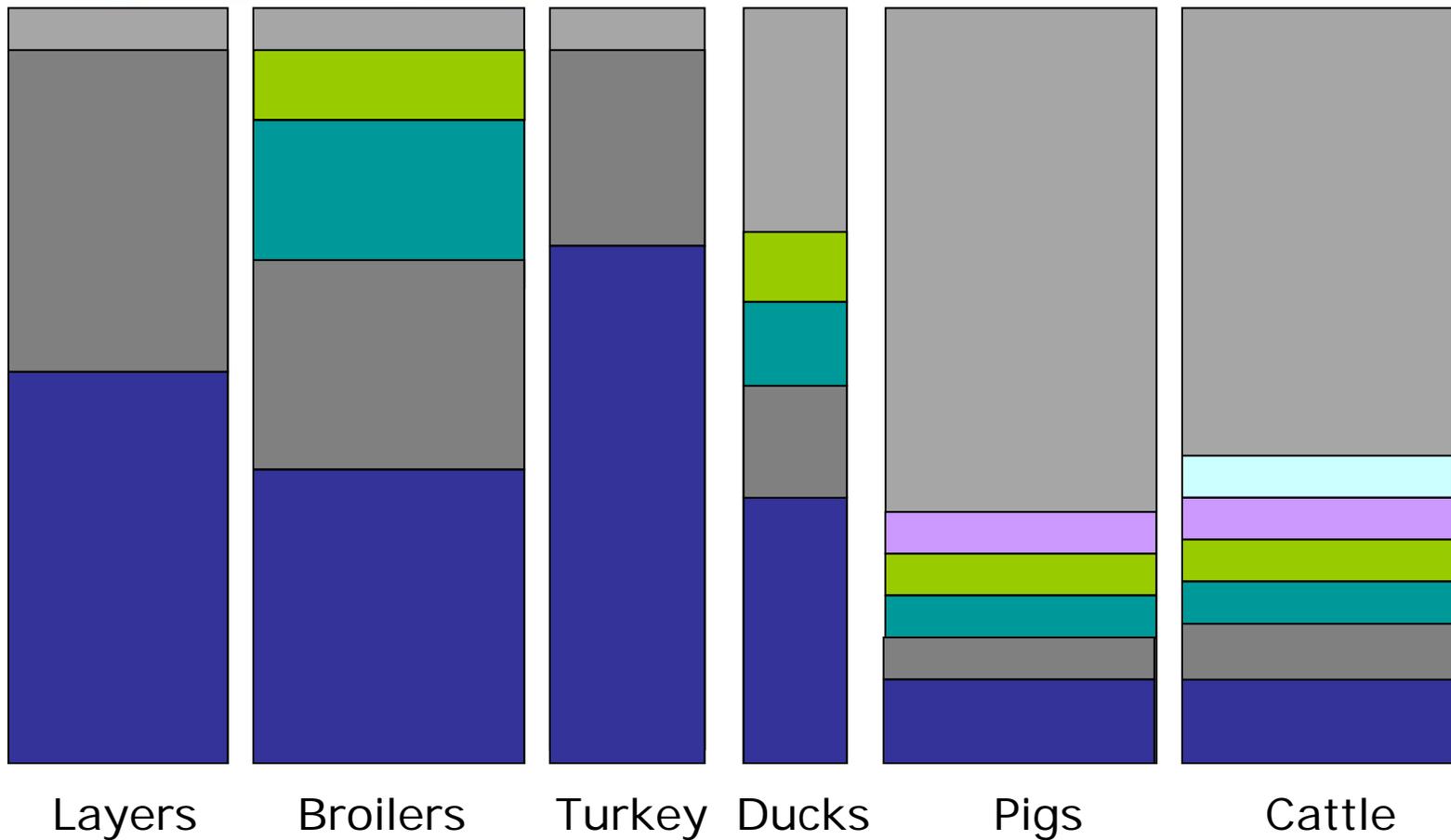


# Animal production for food

## Number of animals (x 1000) for production (FAO, 2006)

	Developed	%	Developing	%	Total
Poultry	4.518.867	30%	10.627.741	70%	15.146.608
Pigs	285.215	31%	632.420	69%	917.635
Cattle	326.830	46%	383.781	54%	710.611
Small Ruminants	400.136	23%	1.322.038	77%	1.722.174

# Consolidation level in livestock breeding



ABS & AnGR

3



# Pig breeding 2010

**More than 60% of worldwide pig production (total 75 million sows) is still by backyard farming**  
= use of “traditional” genetics



**Professional pig genetics market of 30-40 million sows**

- A handful of specialized “bigger” pig breeding companies (total >35%: PIC, TOPIGS, Danbred, Newsham and Hypor)
- A few big integrators with own breeding organisation (total >15%: Smithfield US, Sadia, CP ..)
- Many small local pig breeders and herdbooks

# Sales of breeding stock (developed countries)



Cattle and small ruminants:

- Most cattle and small ruminants herdbooks & breeding organisations are farmers organisations: breed/genetics is owned by the farmers!
  - Herdbook/breeding organisation responsible for maintenance and further improvement of breed(s)
  - In general breeder/farmer buys semen of an animal and price includes all rights
  - Most cattle and small ruminants herdbooks & breeding organisations are farmers organisations: breed/genetics is owned by the farmers!
- ⇒ ABS: fully open situation: full access to genetics if buyer pays the “market price”

# Sales of breeding stock

(developed countries)



## Pigs

- Most pig herdbooks & breeding organisations are farmers organisations: breed/genetics is owned by the farmers!
  - Herdbook/breeding organisation responsible for maintenance and further improvement of breed(s)
  - In general pig producer buys crossbred gilt and/or crossbred boar/semen from breeder or breeding organisation: price includes all rights
  - In case of sales of purebred animals or semen: breeder or breeding organisation agree on a contract with buyer: animals only for use within farm, not for sales to third parties
  - Some herdbooks or breeders sell purebred animals: price includes all rights
- ⇒ ABS: open situation: access to genetics if buyer pays the “market price” and agrees on term of use

# Sales of breeding stock

(developed countries)



## Poultry:

- Almost all poultry breeding organisations are privately owned farmers organisations: breed/genetics is owned by the farmers!
  - Breeding organisation responsible for maintenance and further improvement of breed(s)
  - In general egg or poultry meat producer buys crossbred hen or 1 day chicken from breeder or breeding organisation: price includes all rights
  - In general NO sales of purebred animals or semen
- ⇒ ABS: open situation: access to genetics if buyer pays the “market price” and agrees on term of use

# Code EFABAR

Guiding principles of Code EFABAR for sustainability in breeding:

- **Food safety & public health:** indirectly along reduced use of medicines + high health production
- **Product quality:** carcass & meat quality
- **Genetic diversity:** optimal use of existing genetic variation between and within breeds/populations
- **Efficiency:** economic viable production + use of feed and food by products available
- **Environment:** increase feed efficiency + decreased emission of N & P
- **Animal health & welfare:** maintain intrinsic value + improve (general) disease resistance



# Conservation of biodiversity

Pig & poultry herdbooks and breeding programs work in general with closed populations.

⇒ Full responsibility for maintenance of genetic variation within breeds (limited inbreeding  $<1\%$  per generation)

⇒ In Netherlands breeders take part in gene-bank of CGN (semen of all breeds stored)

⇒ Agreement with regard to use of stored semen:

- o Short term only for endangered breeds

- o Long term ownership for CGN



# Conservation of biodiversity

Cattle and small ruminants herdbooks work in general with open populations.

⇒ Own (local) responsibility for maintenance of genetic variation within breeds (limited inbreeding  $<1\%$  per generation)

⇒ In Netherlands breeders take part in gene-bank of CGN (semen of several breeds stored)

⇒ Agreement with regard to use of stored semen:

- o Short term only for endangered breeds
- o Long term ownership for CGN

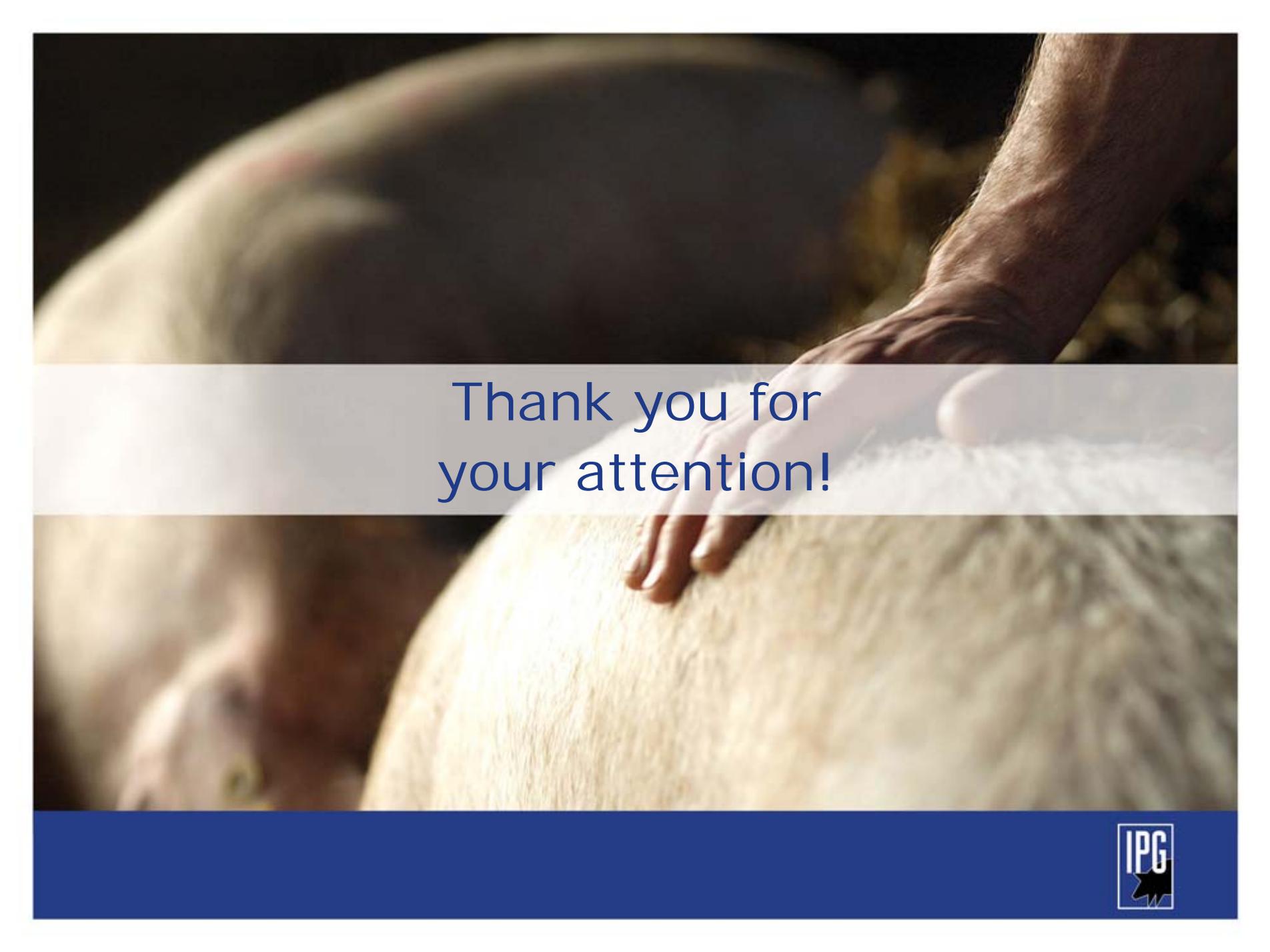


# Summary

Main part of animal genetic resources (>60%) in developing countries: local herdbooks & communities

ABS: open situation: access to genetics if buyer pays the “market price” and agrees on term of use

In Netherlands breeders take part in gene-bank of CGN (semen of several breeds/species stored) with long term ownership by CGN



Thank you for  
your attention!

