



**The customer value of  
high quality A.I.**

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Manager A.I. Noord Brabant**



A.I. Noord Brabant

And

Artificial Insemination Management  
Worldwide

# A.I. IN The Netherlands

**STATION INSEMINATIONS 3.950.000**

**ON FARM A.I. INSEMIN. 200.000**

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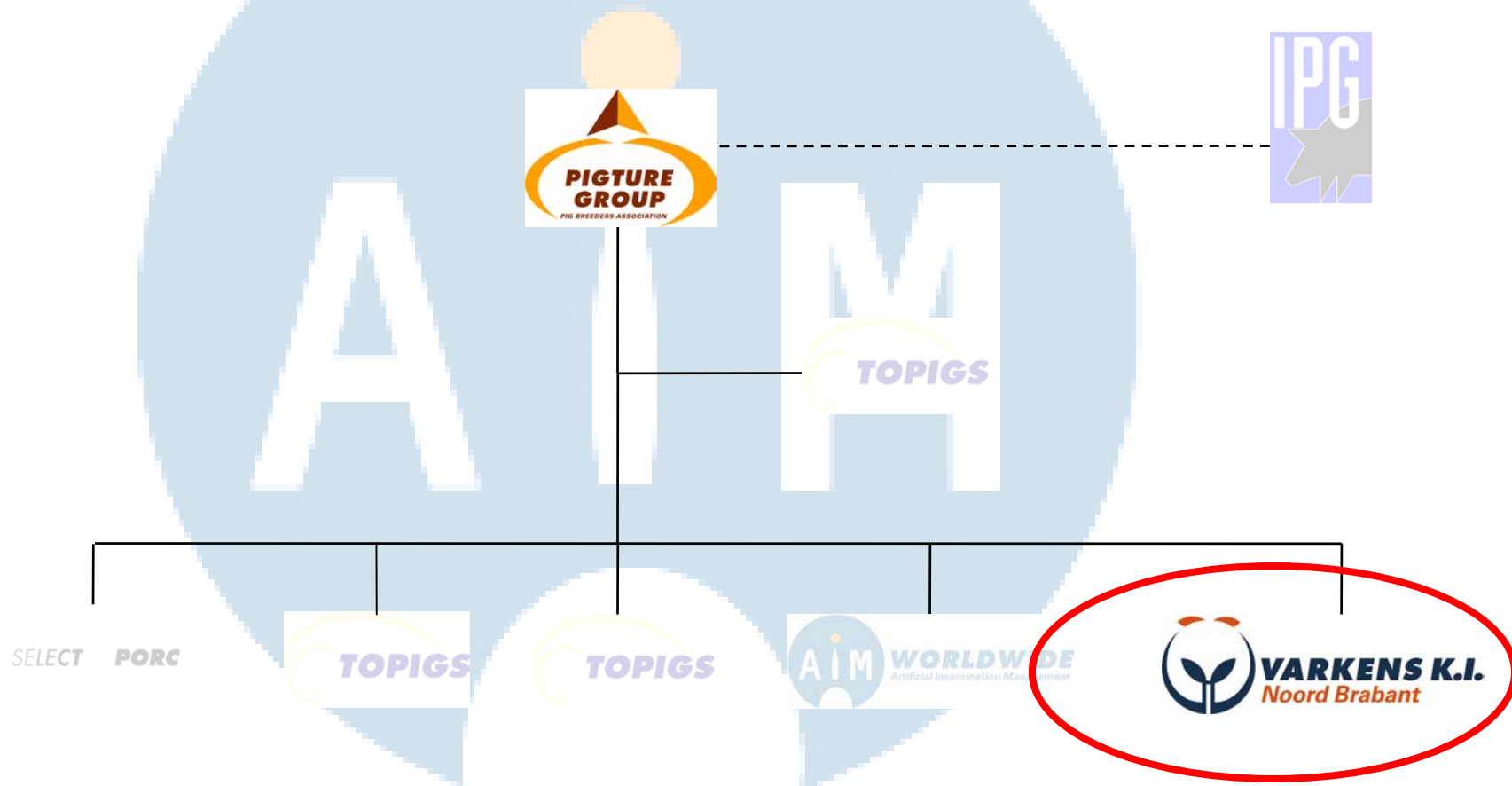
**TOTAL INSEMINATIONS 4.150.000**

**IN TOTAL 950.000 SOWS.**

**4.5 INS./SOW/YEAR (75 % DOUBLE, 10% RE, 2.3 LITTERS/YEAR)**

**4.275.000 MATINGS / YEAR 97% A.I.**

# The organisation



## A.I. activities in the Netherlands

➔ A.I. Noord Brabant 1.33 million doses of semen per year

✎ ISO 9001 certified and EU certificate

✎ 4 Boar studs (700 boars), 2 laboratories

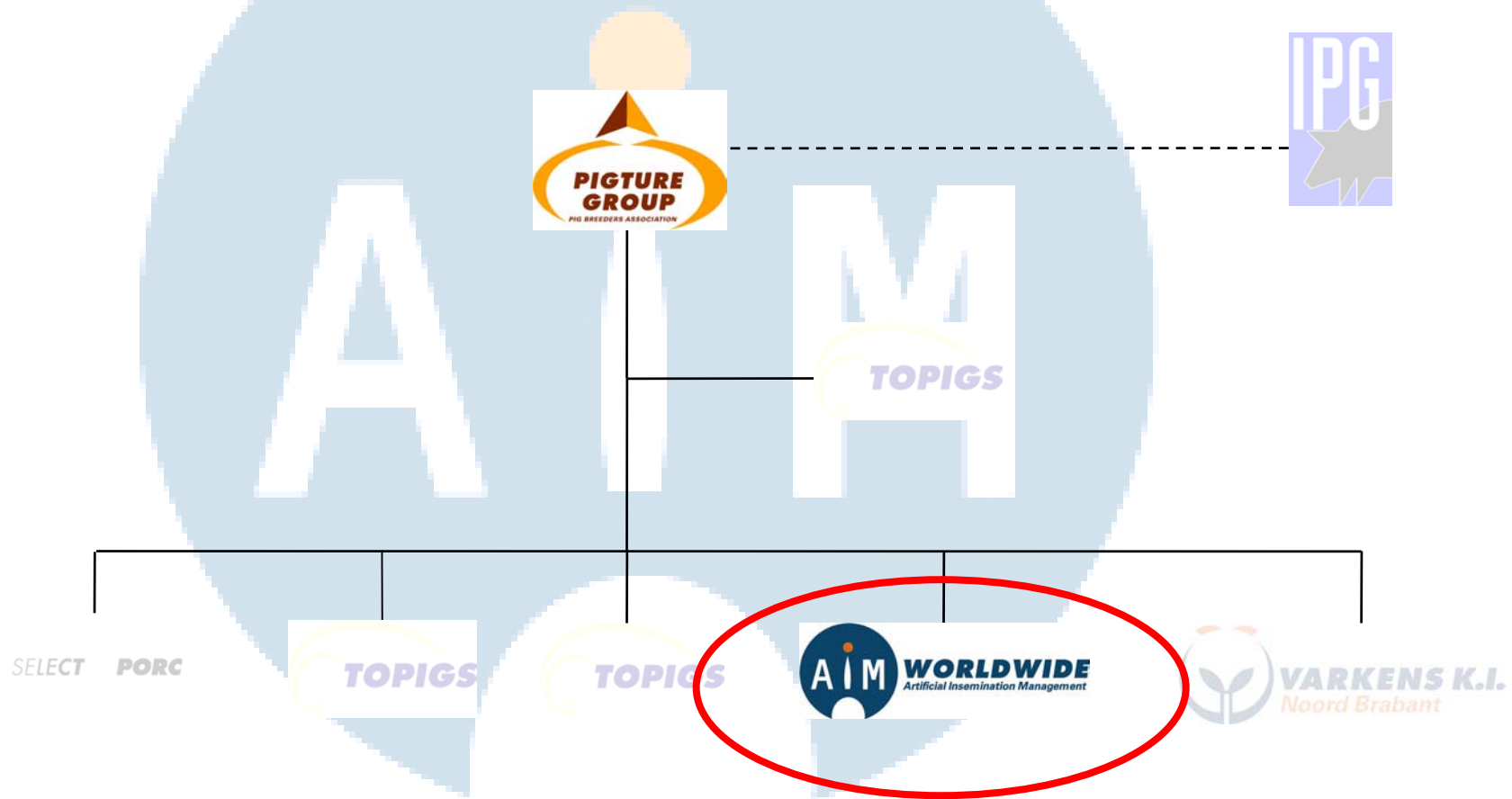
✎ Strict bio-security measures:

➔ Stud --> laboratory --> distribution

➔ Pre-quarantine --> Quarantine --> Stud

✎ Basic research (Dutch Federation of Co-operative Swine AI-centres)

# The organisation



# AIM Worldwide : Mission

Highest as possible reproduction results:

- Supprien quality of semen
- The right reproduction techniques
- The right moment of insemination
- Continues research on A.I. and reproduction: ***to keep improving and enlarging our knowledge***

***Global chAIIn of knowledge***

# Artificial Insemination Management Worldwide

-  In total > 4.5 million doses produced with quality- and production- protocol's of Research Cooperation
-  R&D combined research
-  Management of swine A.I.
  - ← Participations (joint ventures in Spain)  
(1.2 million doses of semen per year)
  - ← Knowledge agreements; doses related royalty
  - ← Technical support on request
  - ← Development of new A.I. stations and technique
-  Sales of A.I. materials and equipment
-  Sales of modified diluent (high quality)



# AI funding R&D and doses produced with AIM protocols

A.I. stat.	dos.brs	nr.stat		
K.I. Nbr	1.300.000	700	4	Pigtire Group
VAC	1.050.000	520	3	coop VAC
AIM Iberica	1.100.000	800	7	Pigtire Group
KI Limburg	730.000	450	3	coop KI Lim
KI Twenthe	260.000	160	1	coop Twent
Eastern Europ.	100.000	100	4	Pigtire Group
Cyprus	100.000	80	1	Animalia Gen.
<b>Total</b>	<b>4.640.000</b>	<b>2810</b>	<b>23</b>	

# The value of high quality semen

- Quality of genetics and genetic improvement
- Sperm technology quality

# **Value of results:**

**Pigs sold: € 22.50 / pig**

**Grow: € 0.027 / gram / pig**

**E.W. conversion: € 1.40**

# Spearheads of the research

## → Quality of sperm cells

- Motility, functionality, morphology

## → Efficiency

- Difference needs of concentration and tenability between boars, new diluters, reproduction (farm)

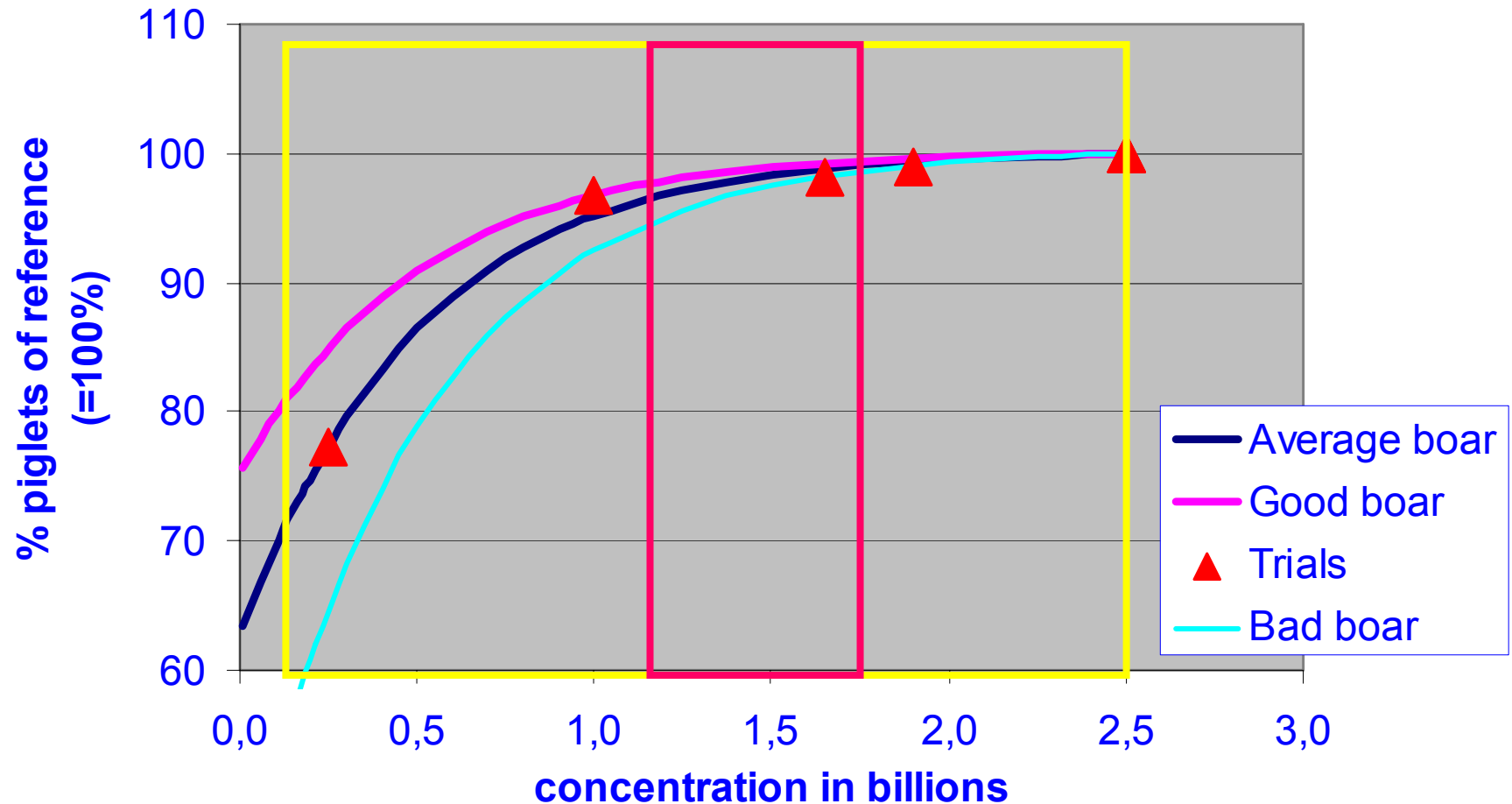
## → Biosecurity

# Goals in research

- Improvement of genetic value of the boars: average level will improve when we need less boars for A.I.
- Selection of A.I. boars with higher results on reproduction: more litters and piglets / insemination
- Longer tenability of sperms: new diluents (guaranteed)

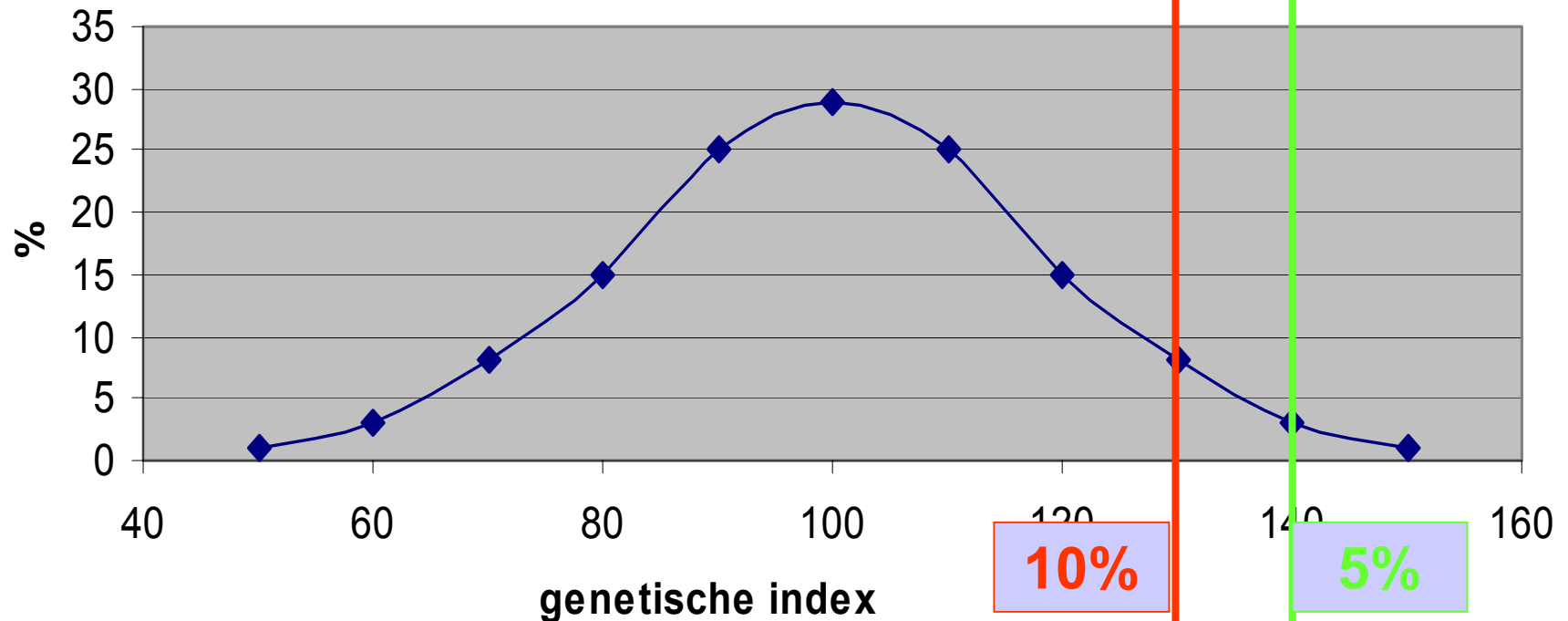
# Dilution Sensitiveness

## Effect of dilution rate on litter size



# Quality/efficiency advantage

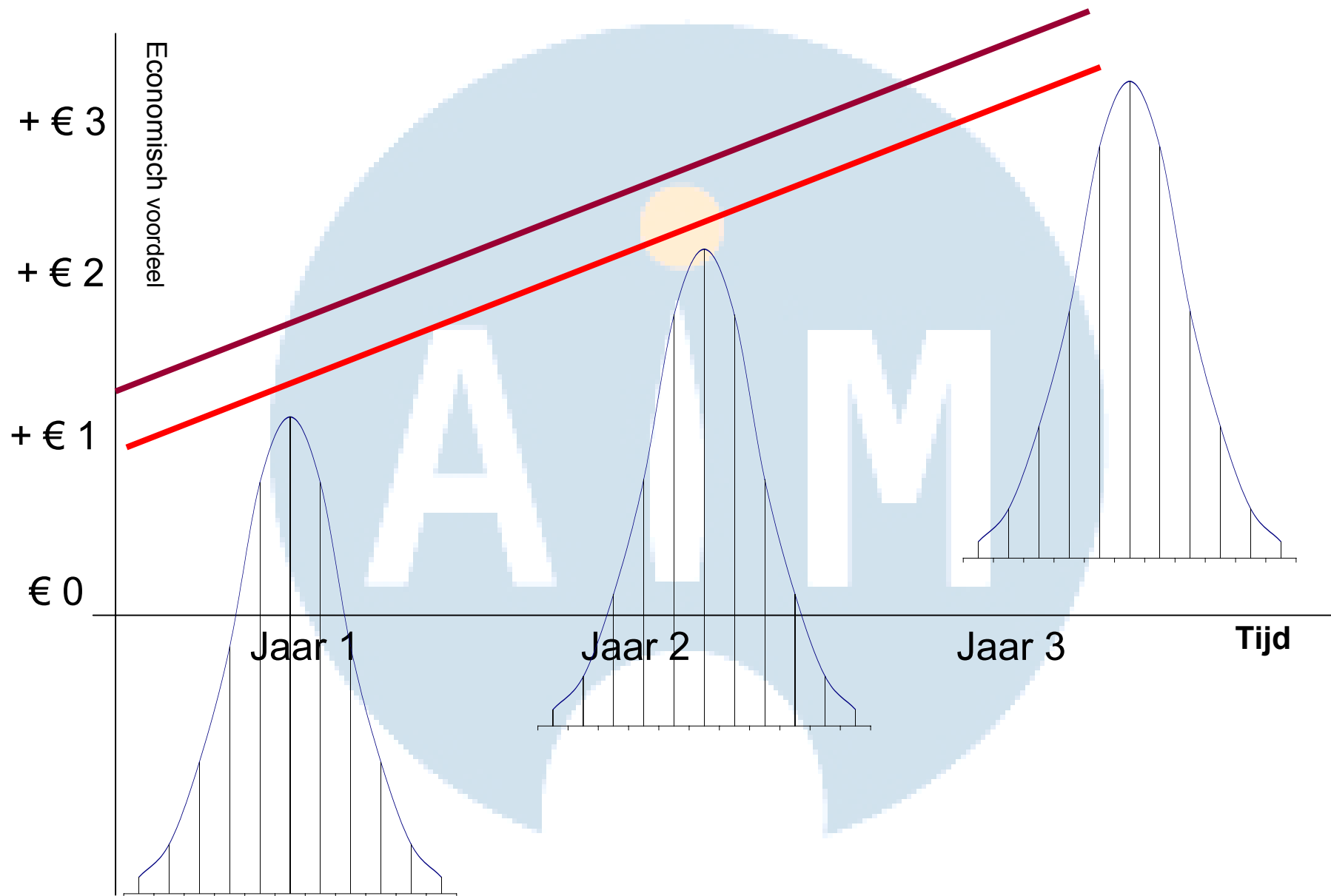
The genetic value in a boar population



# The value of high replacement rates of boars

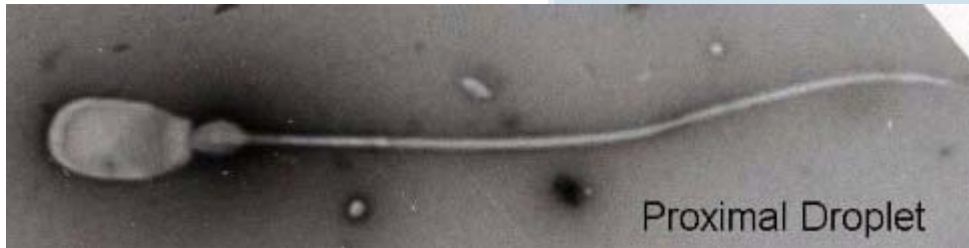
- € 1.00 per pig/ year gen. improvement
- 40%: aver. Boar : 2.5 Y : 30 months
- 60%: aver. Boar : 1.66 Y : 20 months
- Diff in genetic age: 10 months
- Advantage:  $10/12 \times € 1 = € 0.83 / \text{pig}$
- 10 pigs/litt: € 8.33 / 2.0 insem. / litter =  
€ 4.00 / inseminatie/2 = € 2.00/dose



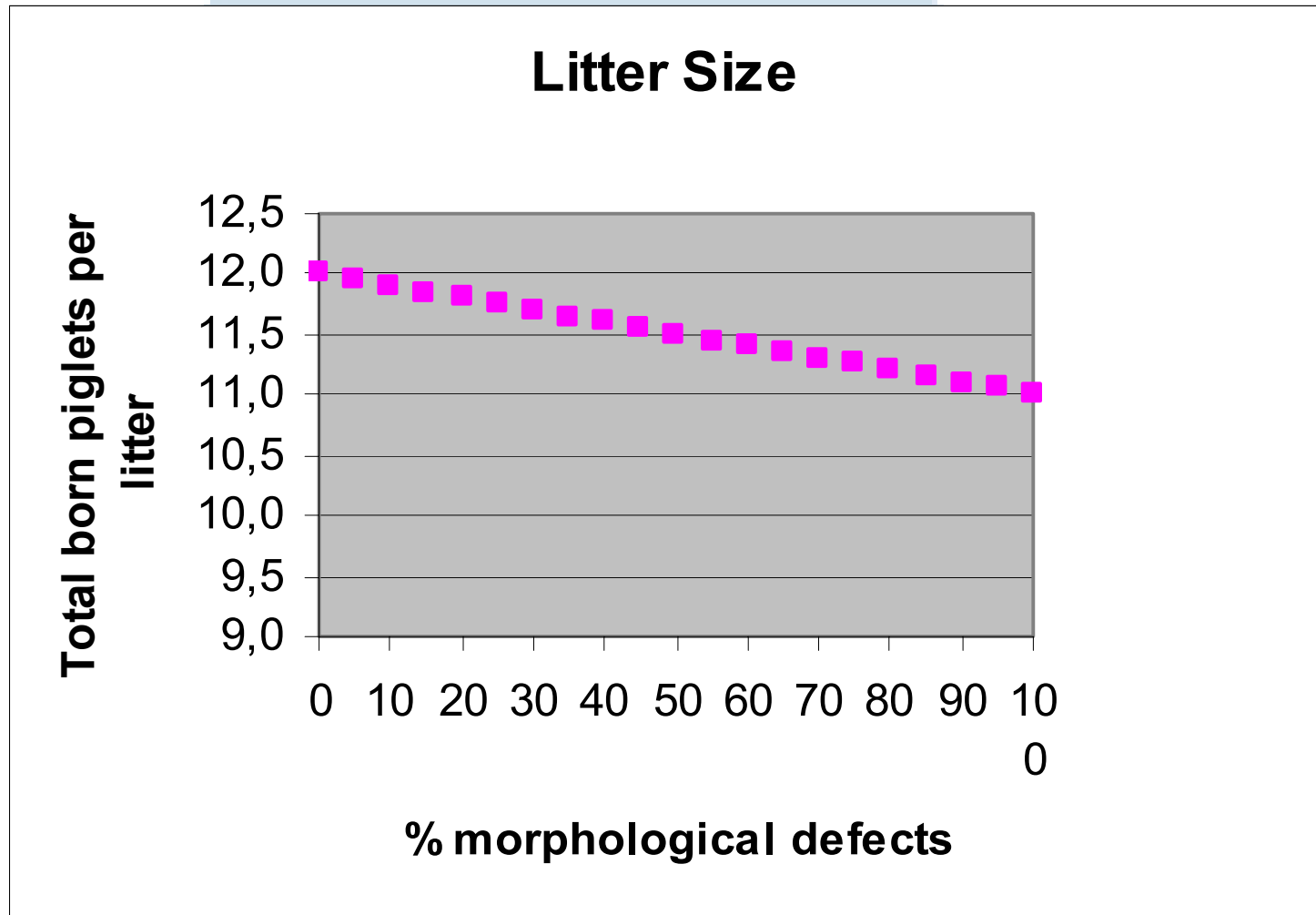




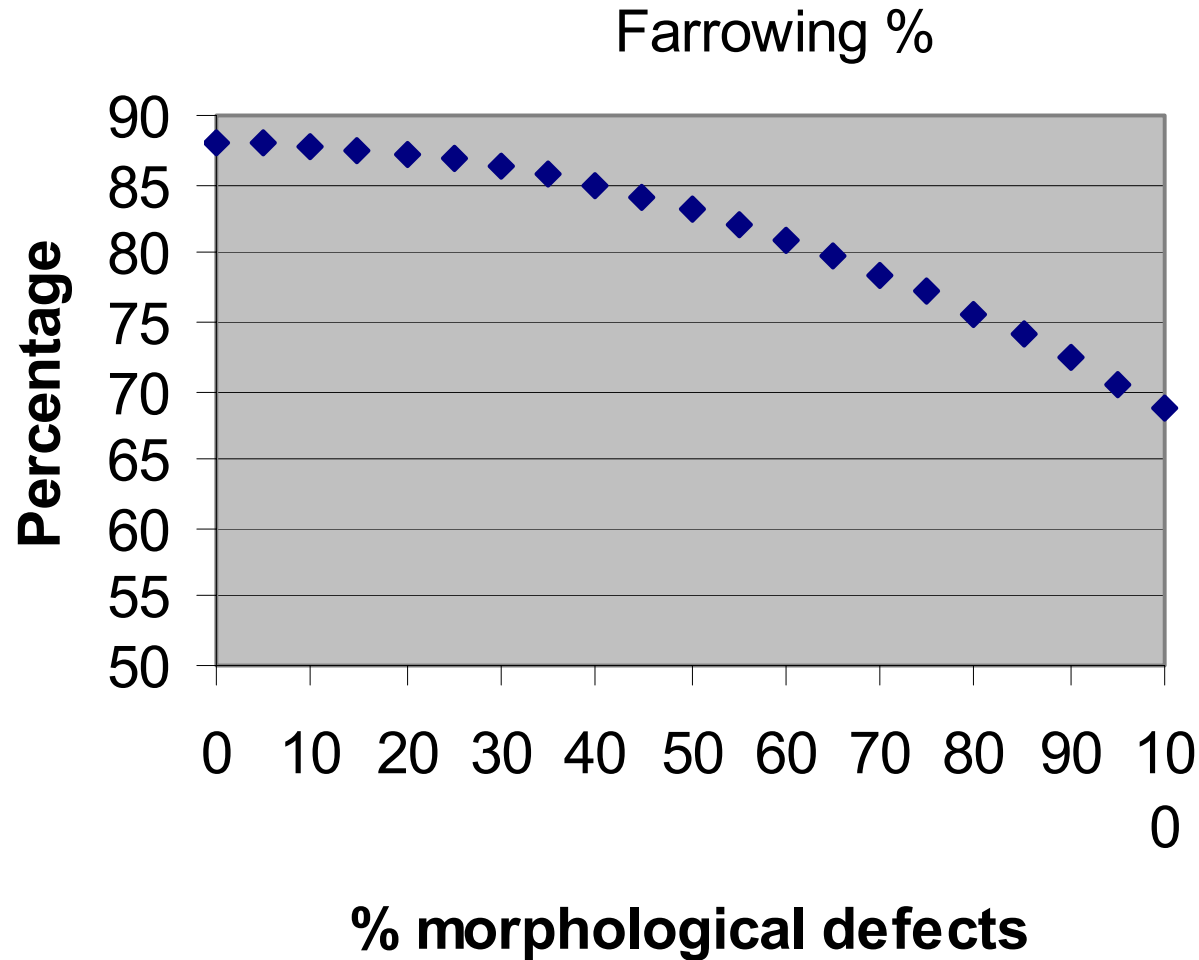
# Morfology and reproduction



# Morfology & piglets born



# Morphology & farrowing



# Client value of morphology research

- Value fresh born piglet: € 22.50
- Average disapproved boars: 6.5 %
- Advantage 0.1 big per 10% morphological defects
- Difference between 10% or 50% morf. defects = 4.6 % farrowing rate
- Inseminations per litter 1.7 doses.

# Client value of morphology research

- Born Piglets € 0.43
- Nbr. of litters/insemination € 0.47

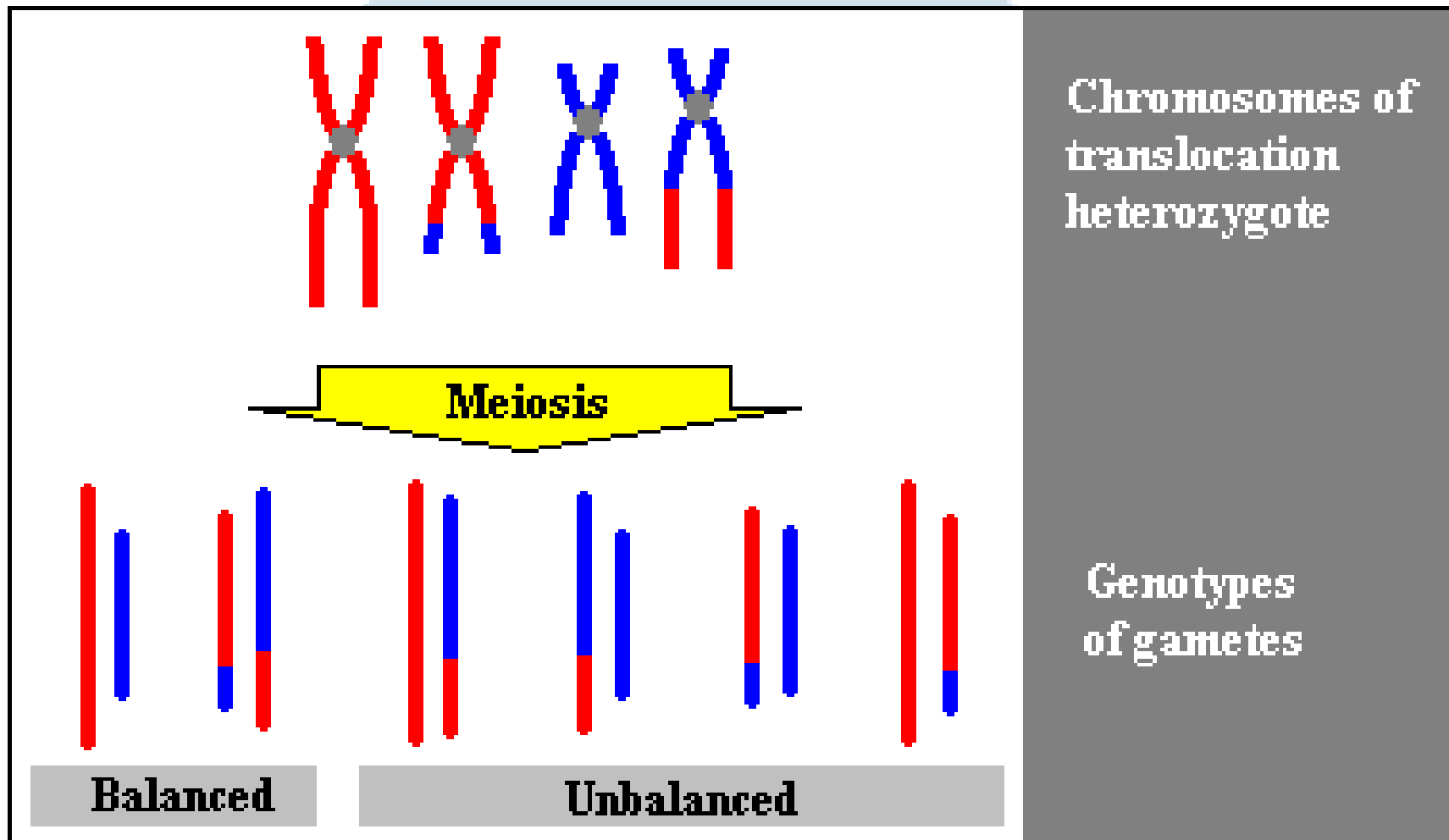
**Total advantage morphology:**  
**€ 0.90/dose**

The logo for Artificial Insemination Management (AIM) is a light blue circle with a stylized white figure of a person with arms raised. A small orange circle is positioned above the figure's head.

# Reciprocal Translocations

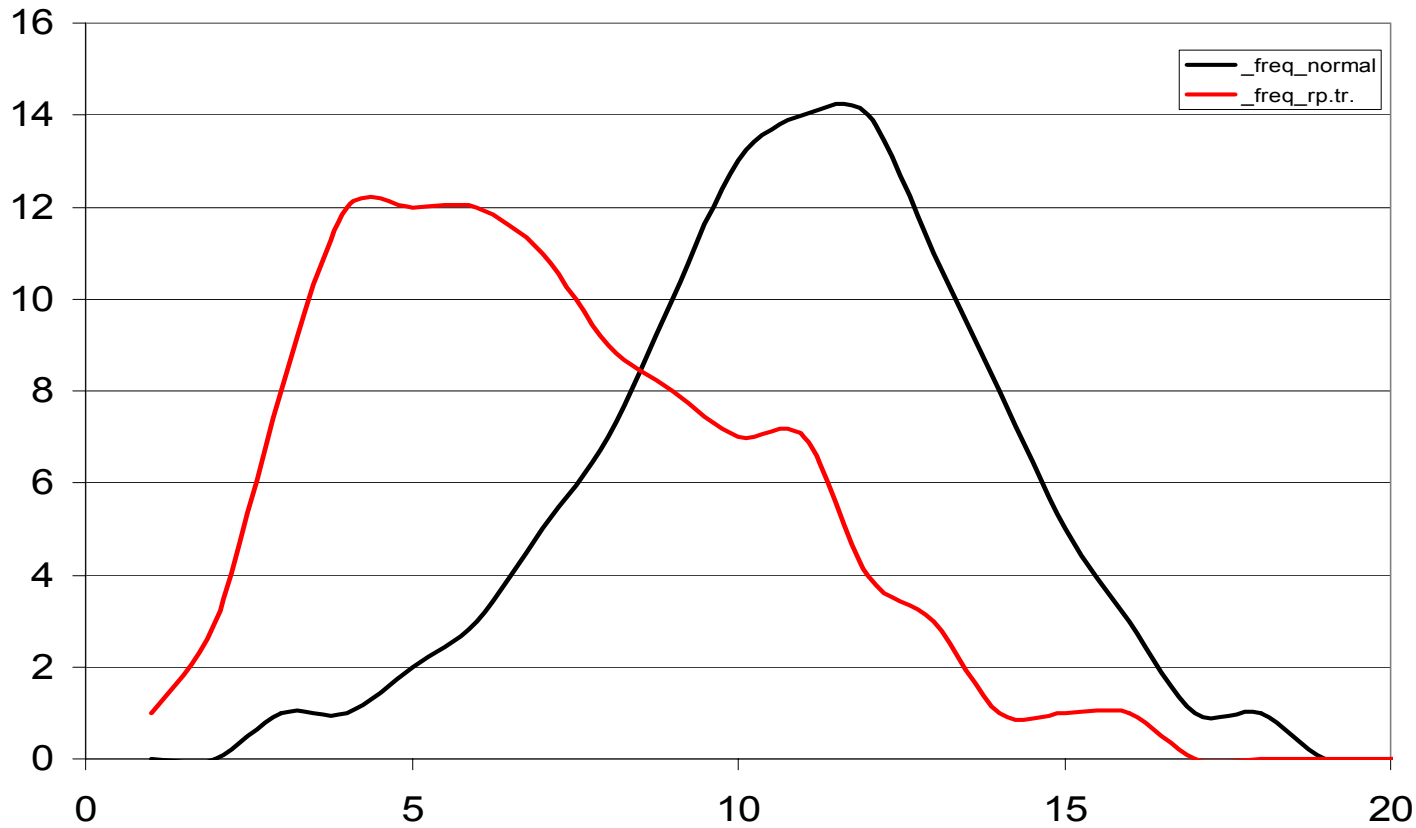


# Reciprocal translocations

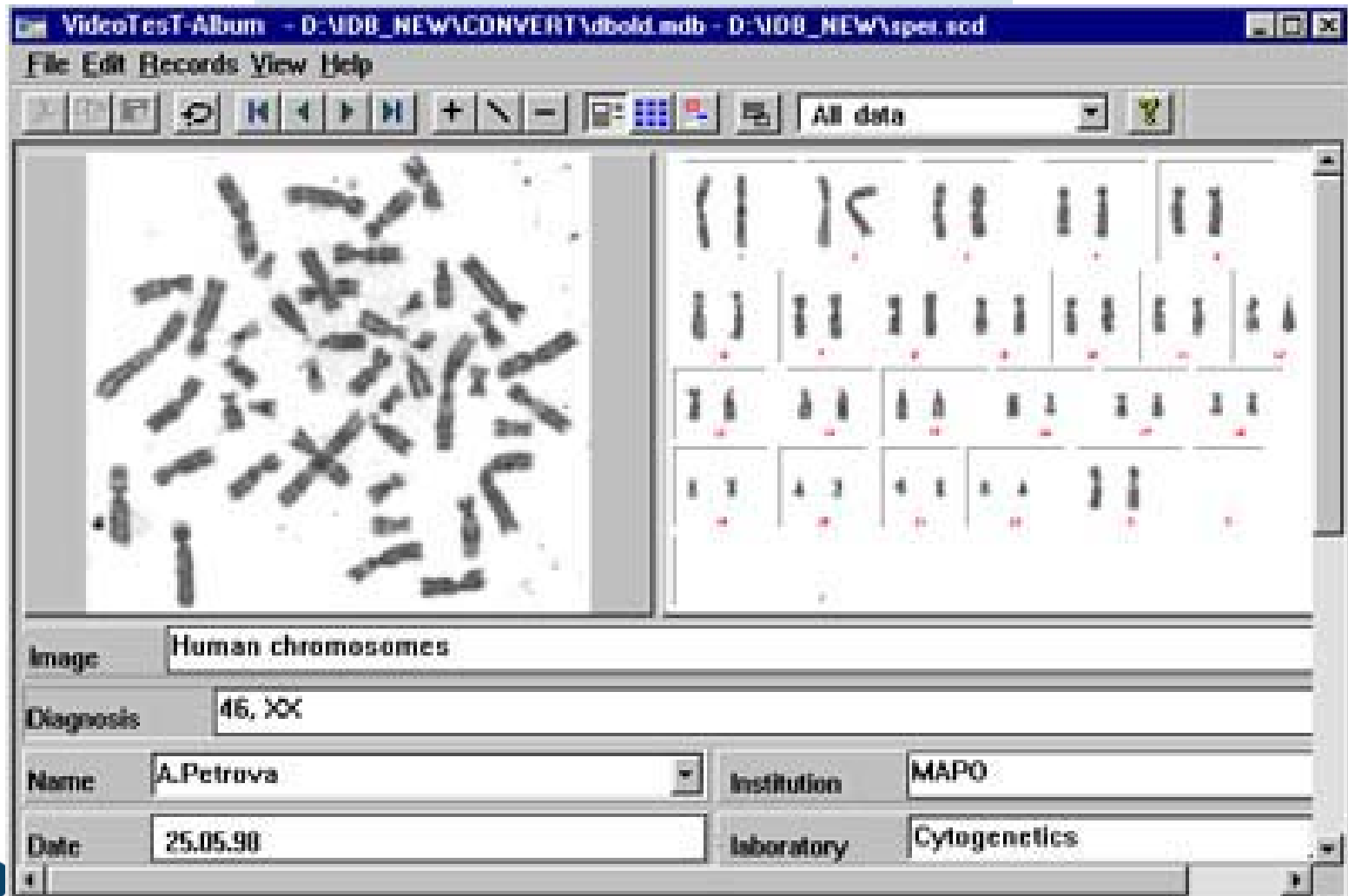


# Result RT-boar

668 translocation litters to 48.000 normal



# Onderzoek op RT: Karyogrammen



# Customer value R.T. controle

- Value fresh born piglet : € 22.50
- Number boars positive R.T. 0.6 %
- Less piglets/litter 5 piglets
- Inseminations per litter 1.7 ins.

Calculation:

$0.6\% \times 5 \text{ piglets} = 0.03 \text{ piglets/litter}$

$0.030 \times € 22.50 = € 0.68 \text{ per worp}$

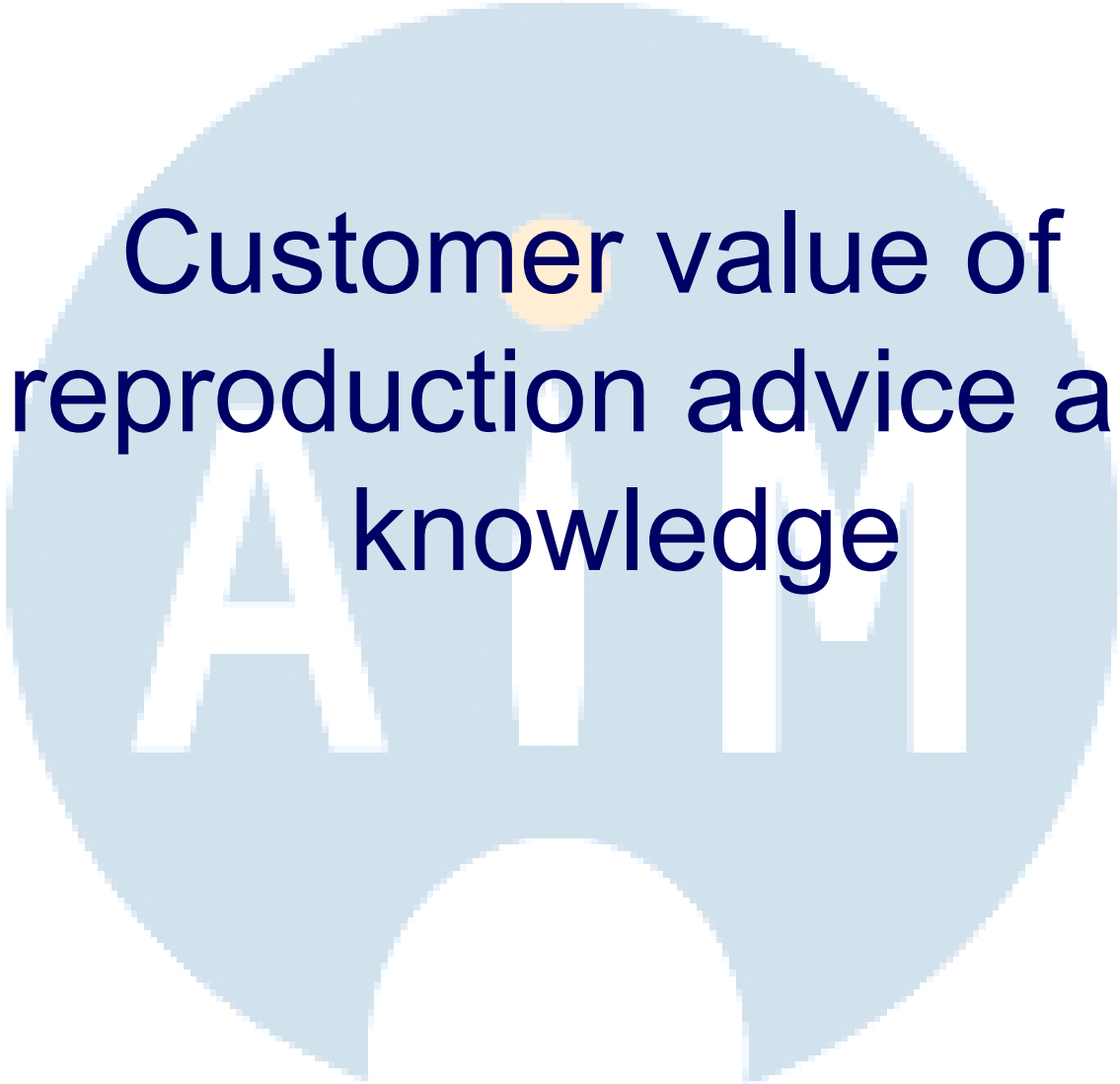
$€ 0.79 / 1.7 \text{ doses} = € 0.40 / \text{doses}$

# Customer value morphology en Reciproce Translocation

- Morphology: € 0,90
- Reciproce Translocation: € 0,40

**Total value these two aspects**

**€ 1,30**

The AIM logo is a light blue circle with a white semi-circle at the bottom. Inside the circle, the letters 'AIM' are written in large, white, sans-serif font. A small orange circle is positioned above the letter 'I'.

Customer value of  
reproduction advice and  
knowledge

# Results sows in Holland (2004)

Number of sows (TOPIGS)


195.000 (629 farms)

	<u>average</u>	<u>10%best</u>
Farrowing rate	86.0	89.0
Total born	13.03	13.66
Live born	12.06	12.70
Dead born	0.97	0.96
% Preweaning mortality	11.8	9.8
Litters sow / year	2.36	2.43
Weaned piglets / litter	10.60	11.5
Weaned / sow / year	25.00	27.90
Replacement rate %	41.90	43.70

The logo for AIM (Artificial Insemination Management) is a light blue circle with a stylized white figure inside. The figure has a yellow circle for a head and the letters 'AIM' for a body.

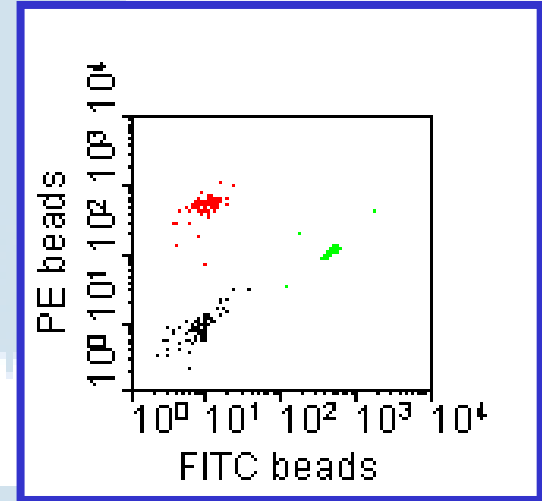
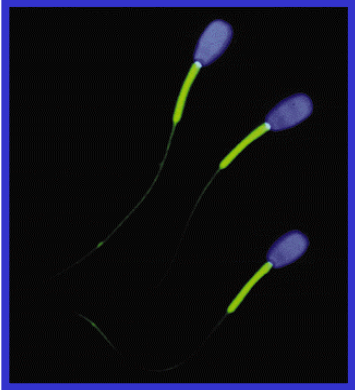
# New development on A.I.




The logo for Artificial Insemination Management (AIM) is a light blue circle containing the letters 'AIM' in white. A small orange circle is positioned above the 'I'.

# **Fluorescence measurements: Flowcytometry**

# Flowcytometry



5000 events/sec.

A large, light blue circular logo with a white outline of a person's head and shoulders. Inside the head is a yellow circle. The letters 'AIAM' are written in white across the center of the logo.

# Computer **A**ssisted **S**emen **A**nalysis

# Motility en concentration



CASA-system and concentration

Results

1

Play Back

1

QC Plots

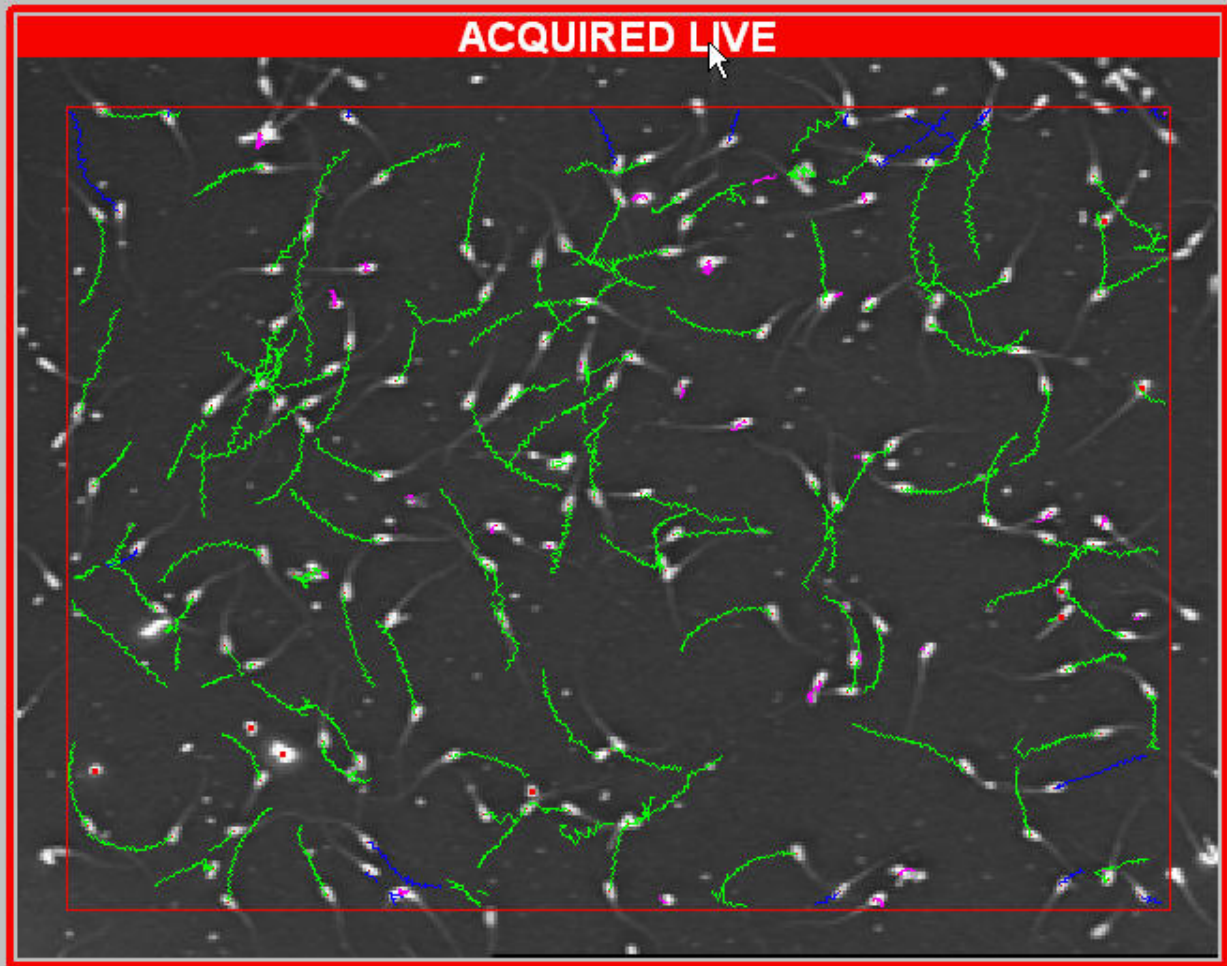
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Bar Charts

1

Custom Reports

1



# Reproduction Know-how

Good A.I. quality- and reproduction management gives the best technical results and the highest financial results:

**KNOWLEDGE = €€€**

***AIM Worldwide***

Global ch**A**I of knowledge



# Our goal:

