

THE POLISH GBV PROJECT

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1. History

2. Data

3. Outline

HISTORY

- 1. Wcgalp 2006**
- 2. Transition from traditional MAS to GBV**
- 3. Official start 2008**
- 4. Genotypes – November/December 2008**

HISTORY

COLLABORATORS

AI STATION BYDGOSZCZ

- funding

INSTITUTE BALICE

- production
+ DNA data

UNIVERSITY OLSZTYN

- molecular
analysis

UNIVERSITY WROCLAW

- statistical
analysis

- DNA
database

- GBV
database



DATA

MICROARRAY

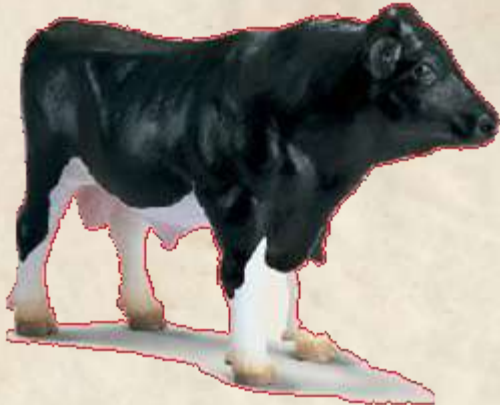


Illumina bovine snp50 beadchip

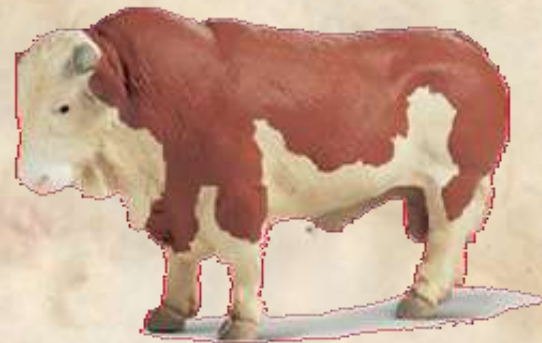
- **54 000 evenly spaced SNPs (51.4 Kb)**
- **call rate 99.5 %**
- **average MAF 0.19**
- **average # polymorphic SNPs 37 758**

DATA

ANIMALS



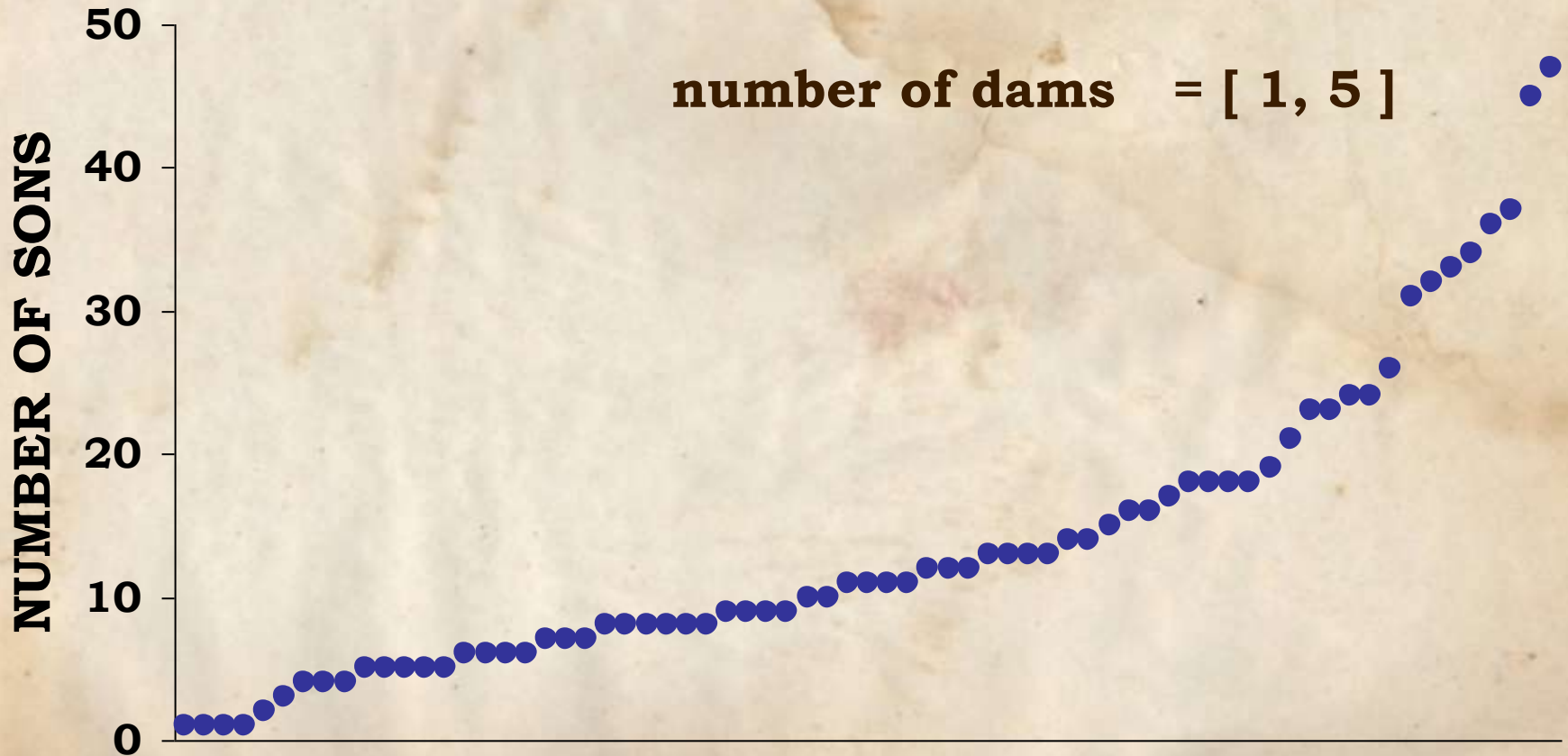
963 HF bulls



**Polish red-and-white bulls
future**

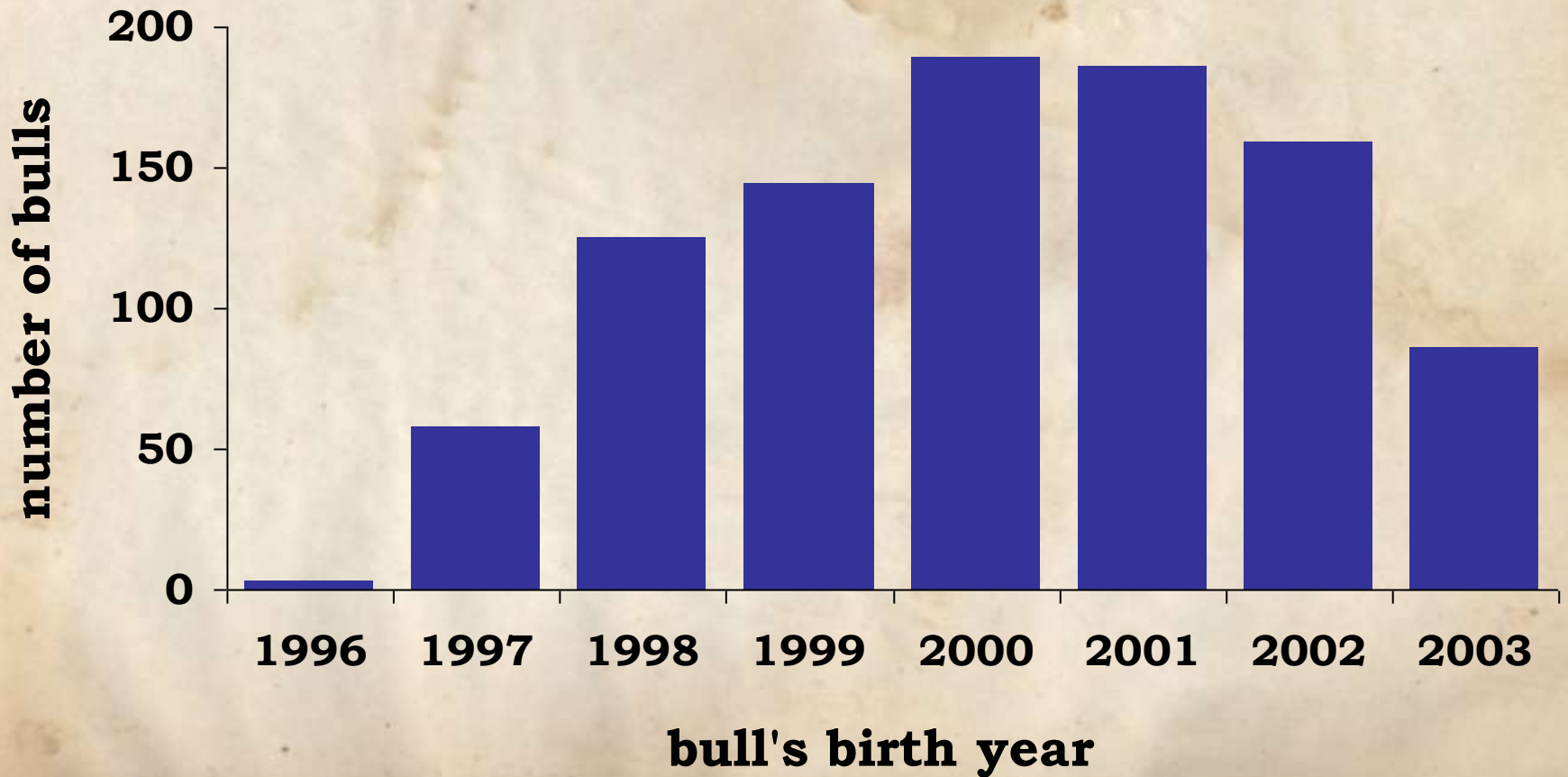
DATA

PEDIGREE



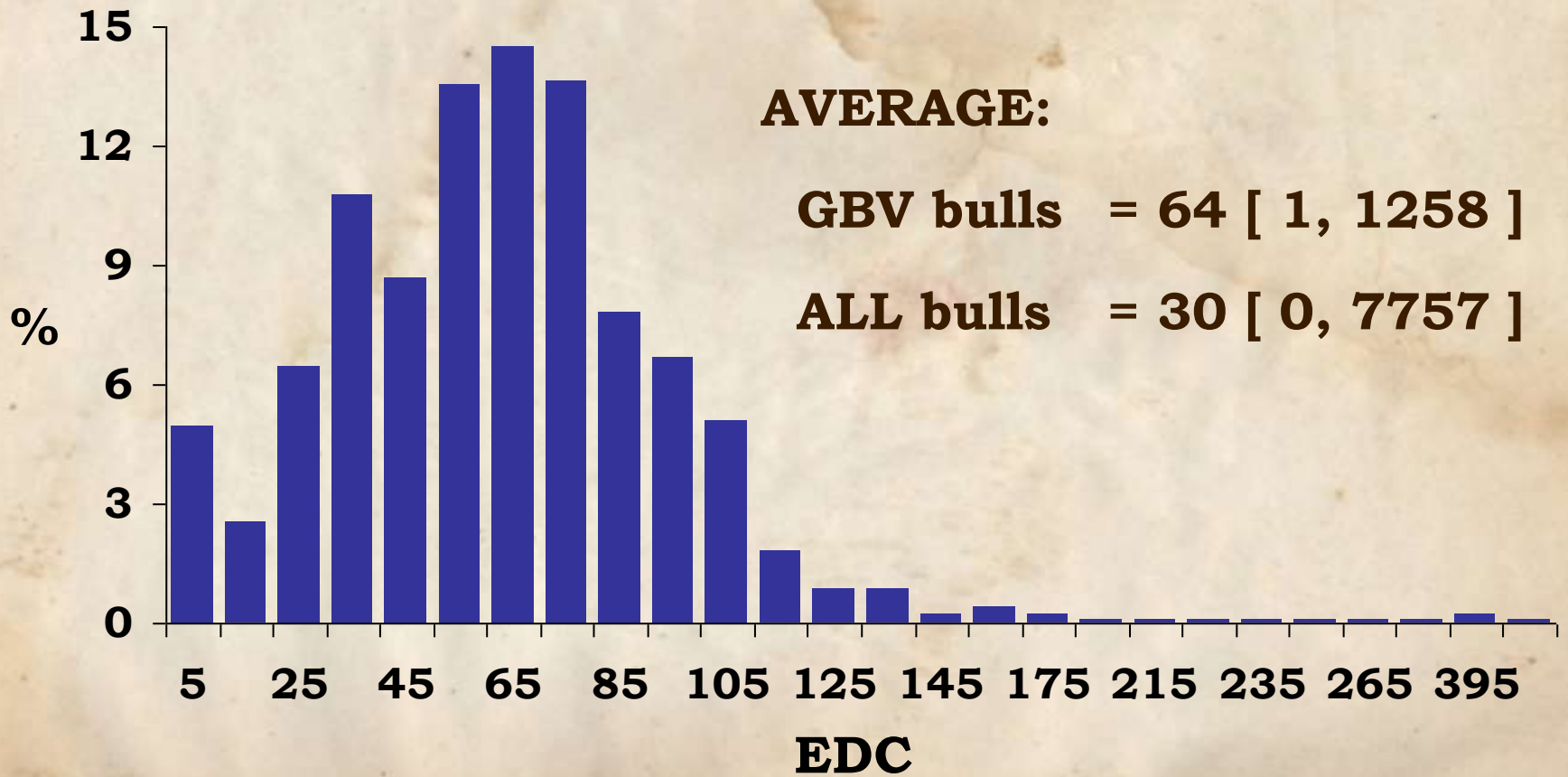
DATA

BIRTH YEAR



DATA

EDC

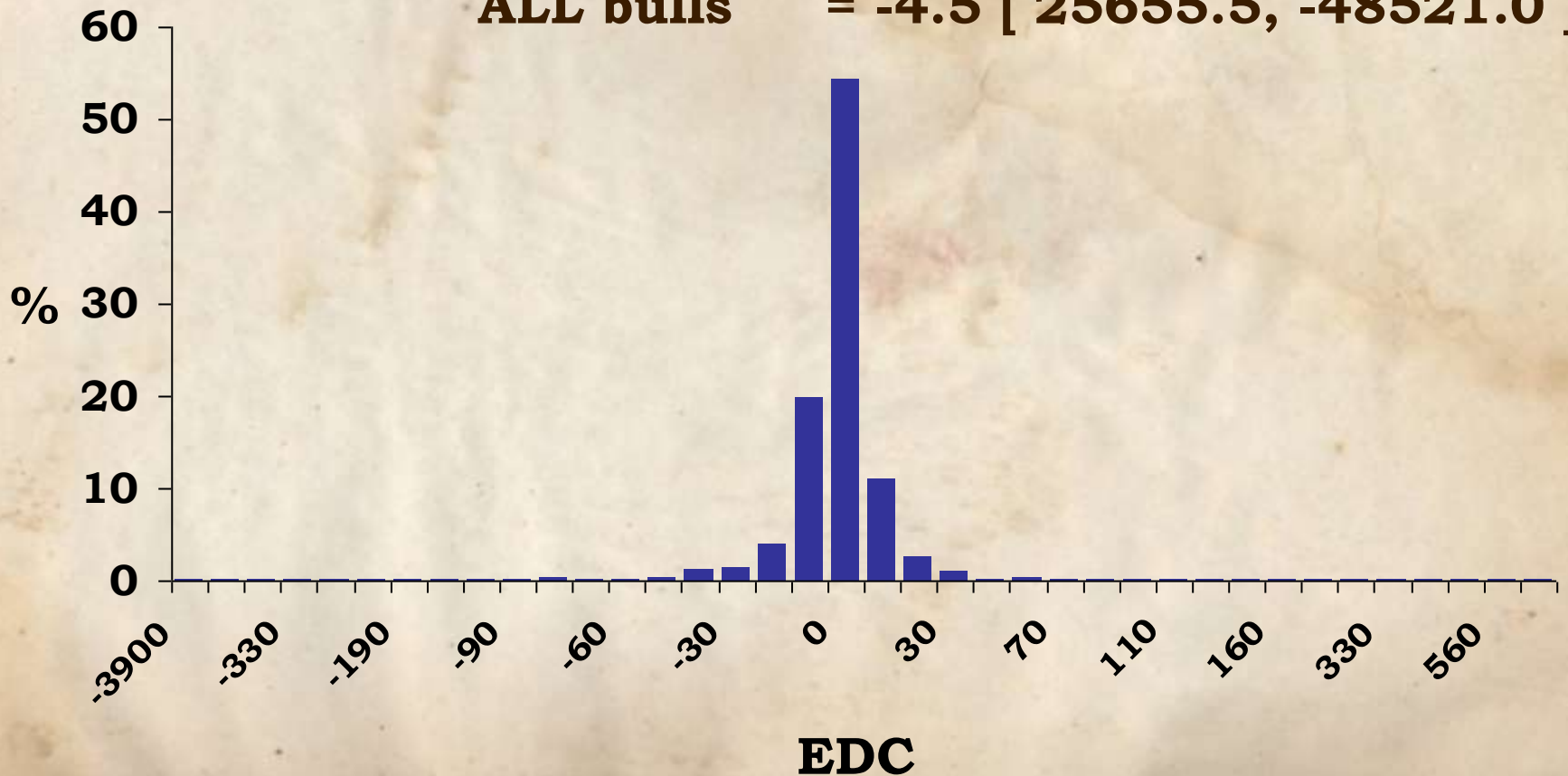


DATA

DYD

AVERAGE: GBV bulls = -4.6 [1265.7, -3901.6]

ALL bulls = -4.5 [25655.5, -48521.0]



OUTLINE

ACTIVITIES

**DNA data base,
genotyping**

**GBV data base,
GBV prediction**

**production + DNA
data preparation**

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**DNA data base,
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**production + DNA
data preparation**

- **setup and run the DNA data base**
- **bull DNA collection and isolation**
- **SNP genotyping (Illumina service, own)**
- **genotyping quality control**
- **analysis of molecular data**

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ACTIVITIES

**DNA data base,
genotyping**

**GBV data base,
GBV prediction**

**production + DNA
data preparation**

- **design, setup and run the GBV data base**
- **simulated data analysis**
- **SNP effect estimation on real data – basic models**
- **SNP effect estimation on real data – multiple SNP models**
- **tSNP and model selection**
- **GBV prediction**
- **system setup and fine tuning**

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ACTIVITIES

**DNA data base,
genotyping**

**GBV data base,
GBV prediction**

**production + DNA
data preparation**

- **preparation of data sets: pedigree, EBV**
- **calculation of DYD: production, conformation, survival**
- **calculation of EDCs**
- **cow DNA collection and isolation**

Thank you for your attention ...

