

Pig Reproduction

- Puberty: 6 - 8 months
- Gestation: 115 days
- Lactation: 25 days
- Wean to breed: 5 days
- Total cycle 145 days
- Maximum possible: 2.5 litters per year
- Pigs per sow per year: 18 to 27

Pigs - the Mortgage Lifters

- Year 1: 1 sow produces 20 pigs
- Year 2: 10 sows produce 200 pigs
- Year 3: 100 sows produce 2,000 pigs
- Year 4: 1,000 sows produce 20,000 pigs
- Year 5: 10,000 sows produce 200,000 pigs
- Year 6: 100,000 sows produce 2,000,000 pigs

Factors Affecting Productivity

Genetics

Environment

Nutrition

Disease

Management

Genetics - Maternal Breeds



Landrace

Yorkshire



Genetics - Terminal Breeds

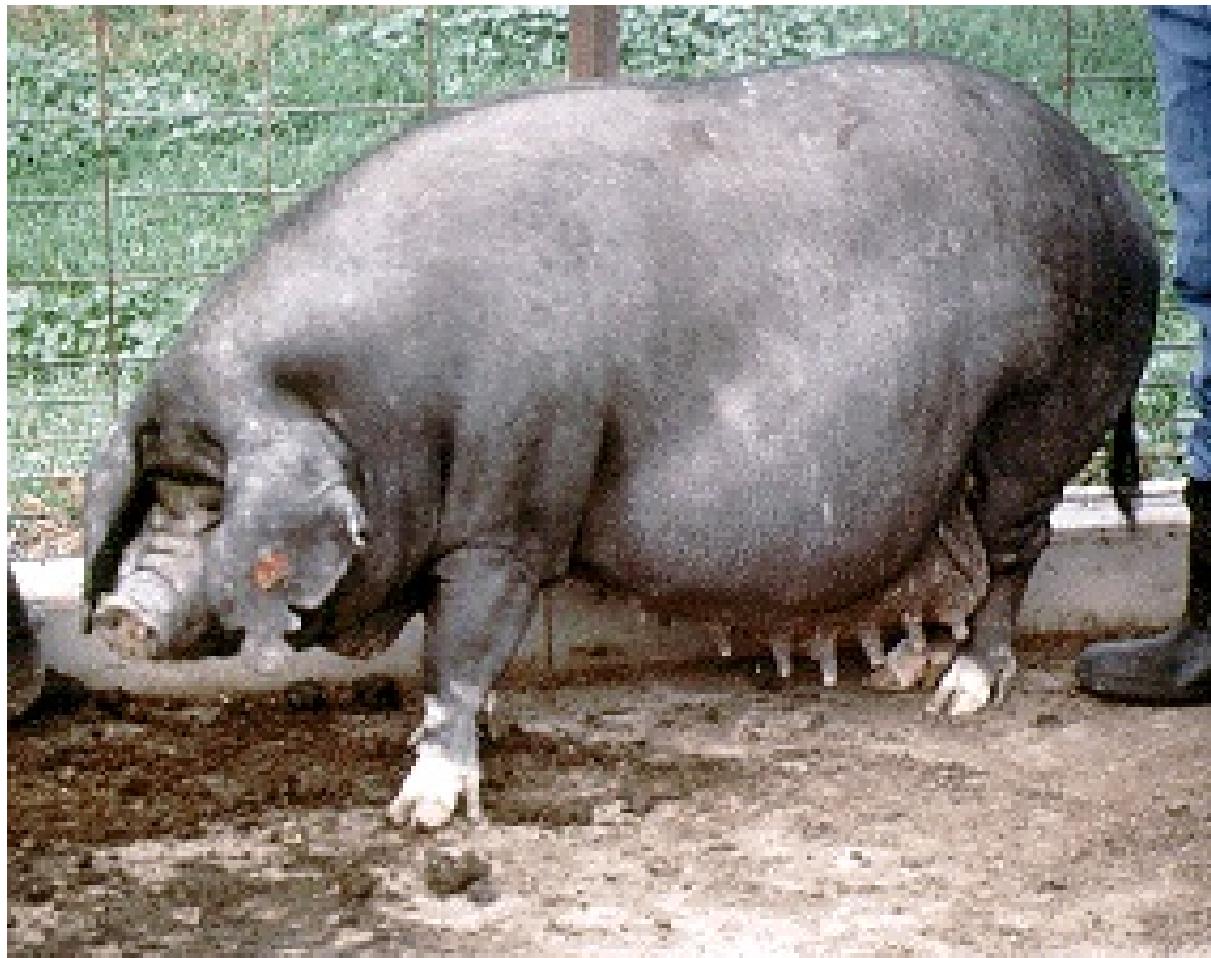


Duroc

Hampshire



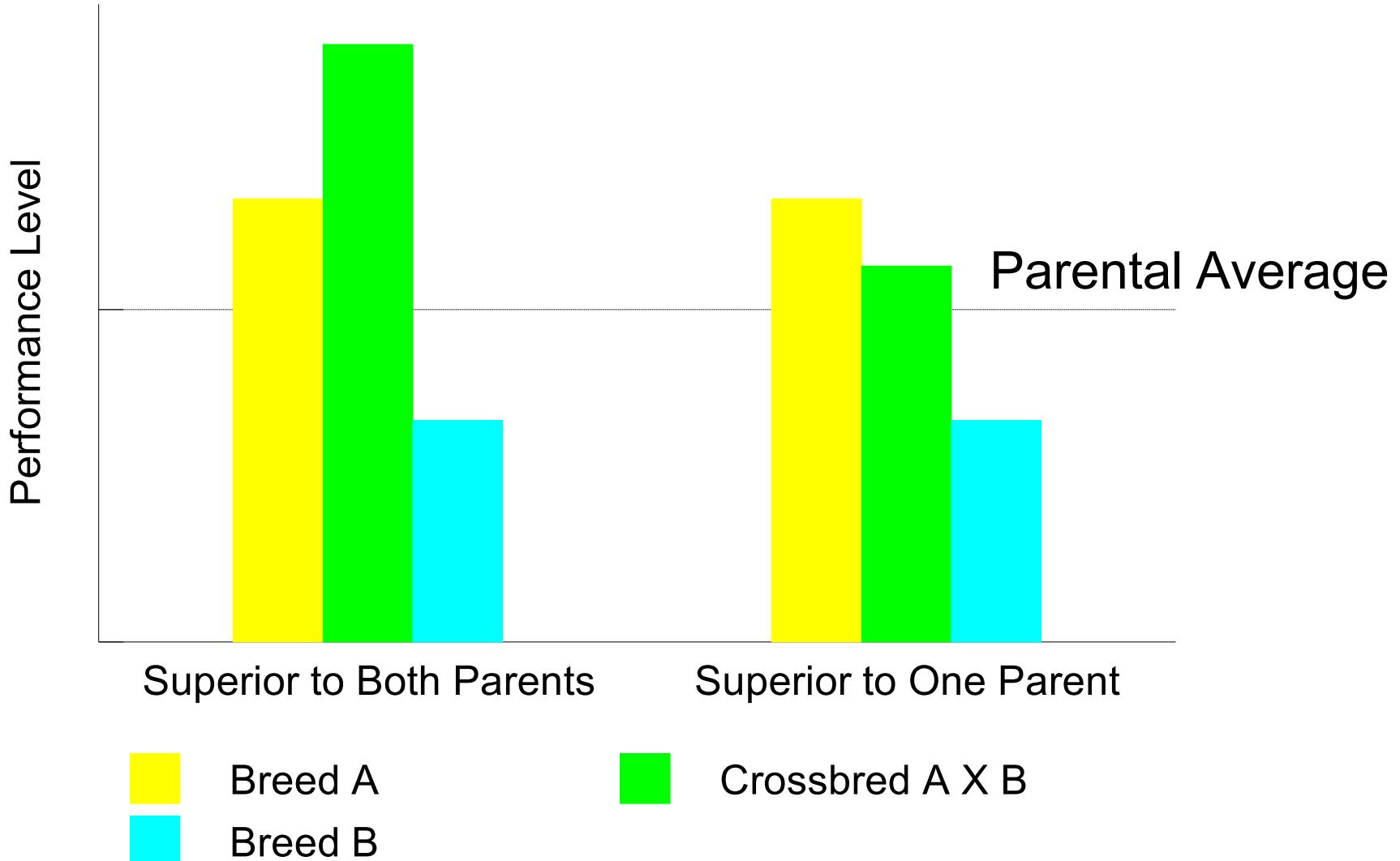
Meishan



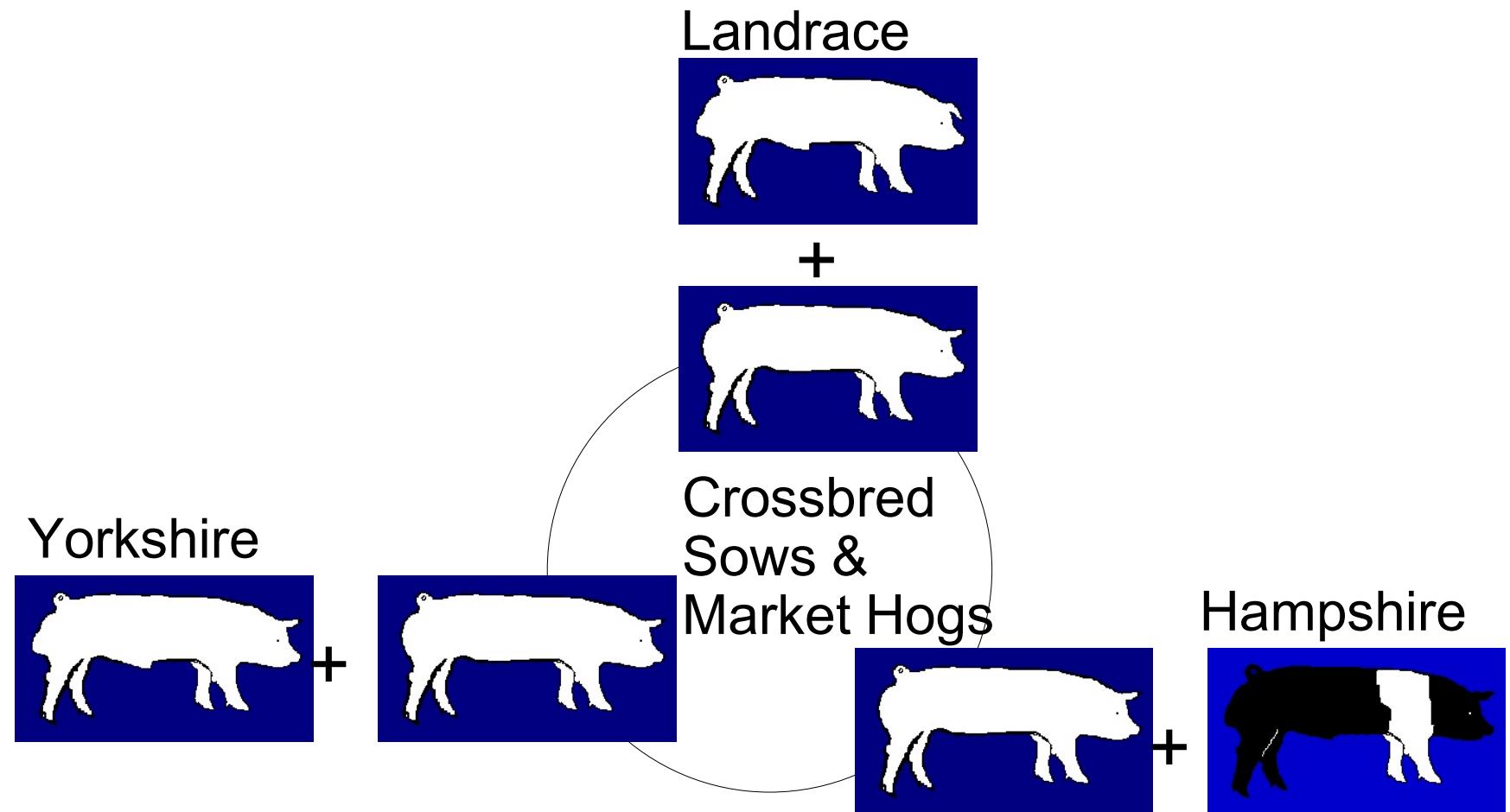
Basis for Improving Traits

Trait	Heritability	Heterosis
Carcass	High	Low
Growth	Medium	Medium
Reproductive	Low	High

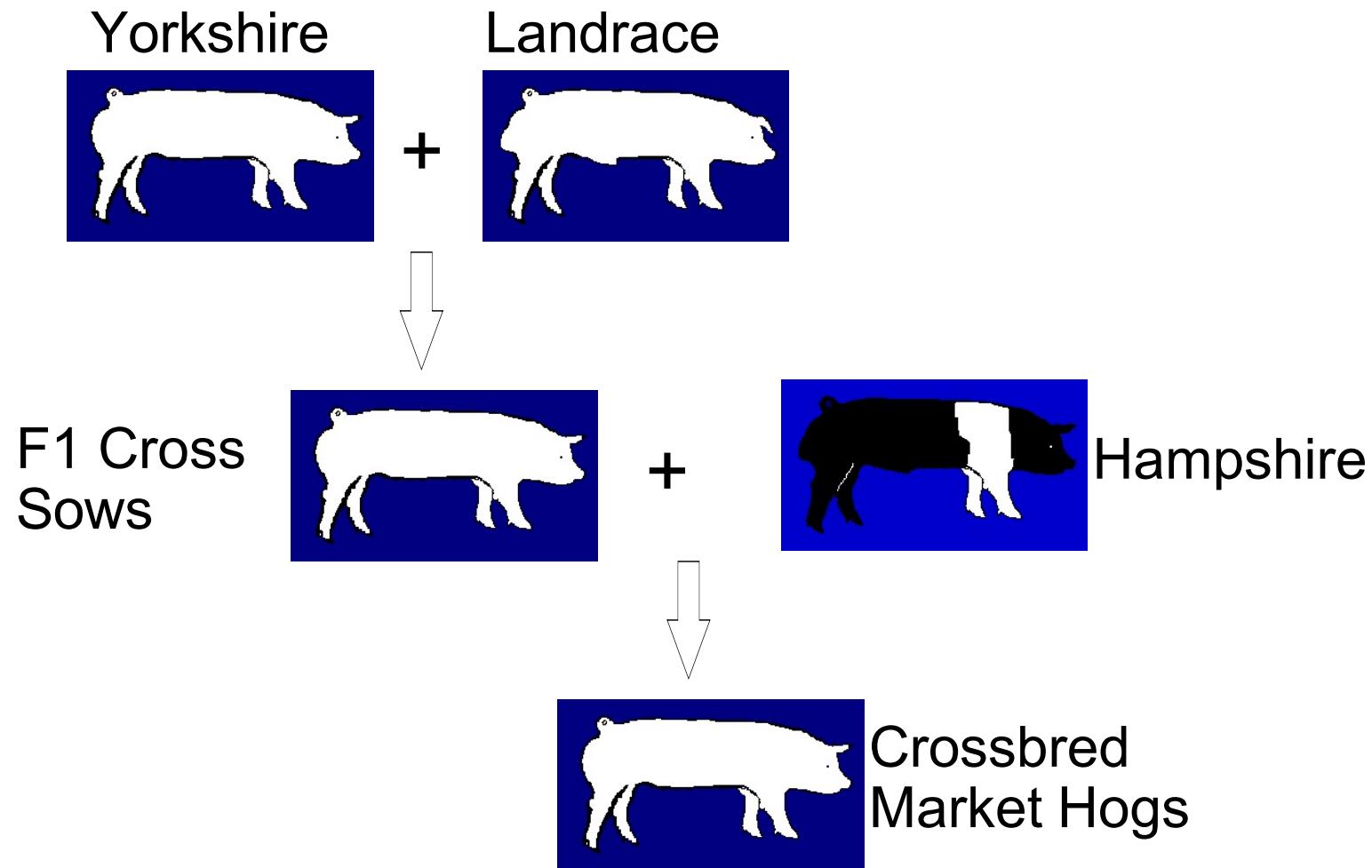
Heterosis



Rotational Crossing



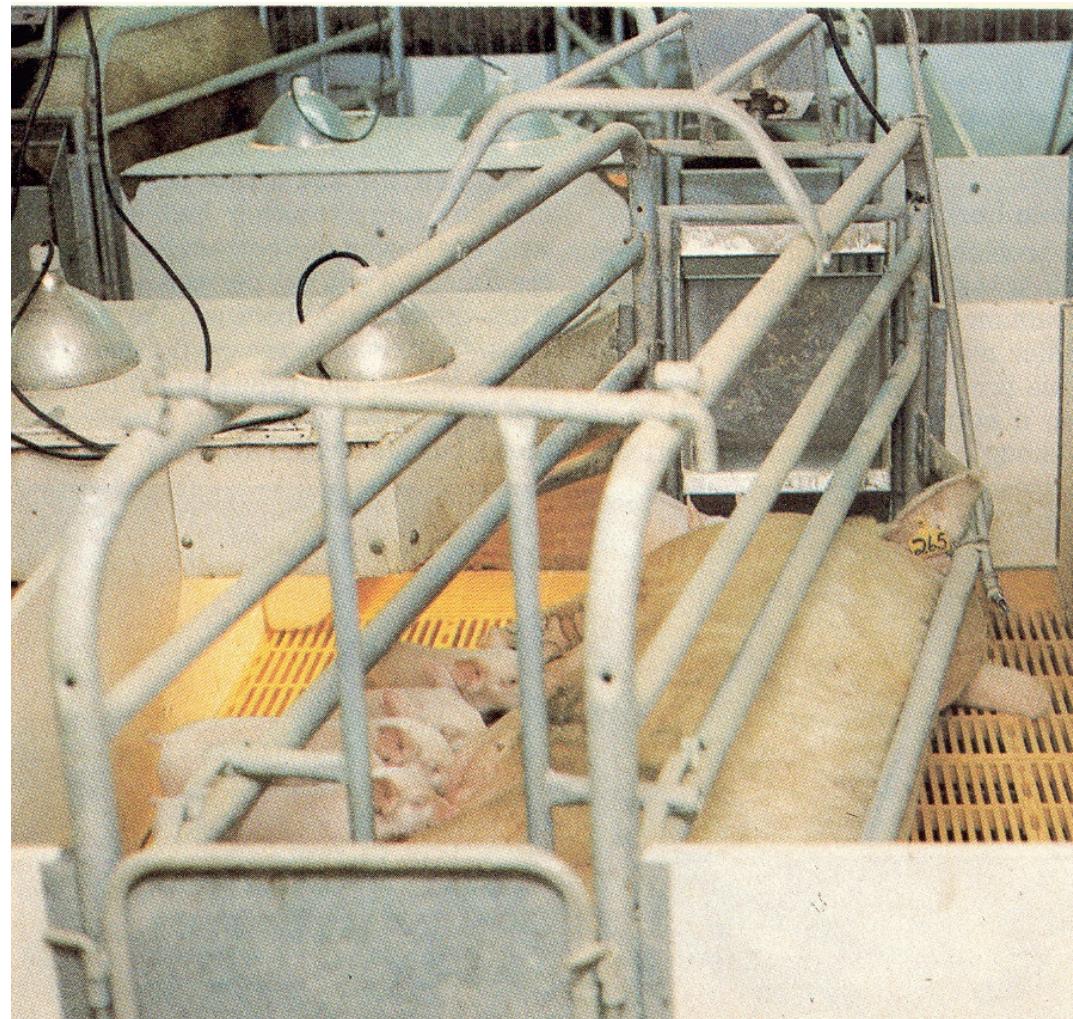
Terminal Crossing



Parturition



Farrowing Crate



Source: Pork '85

Lactating Sow



Gestation Housing



Stalls or

Pens?

Source: Pork, August 2002

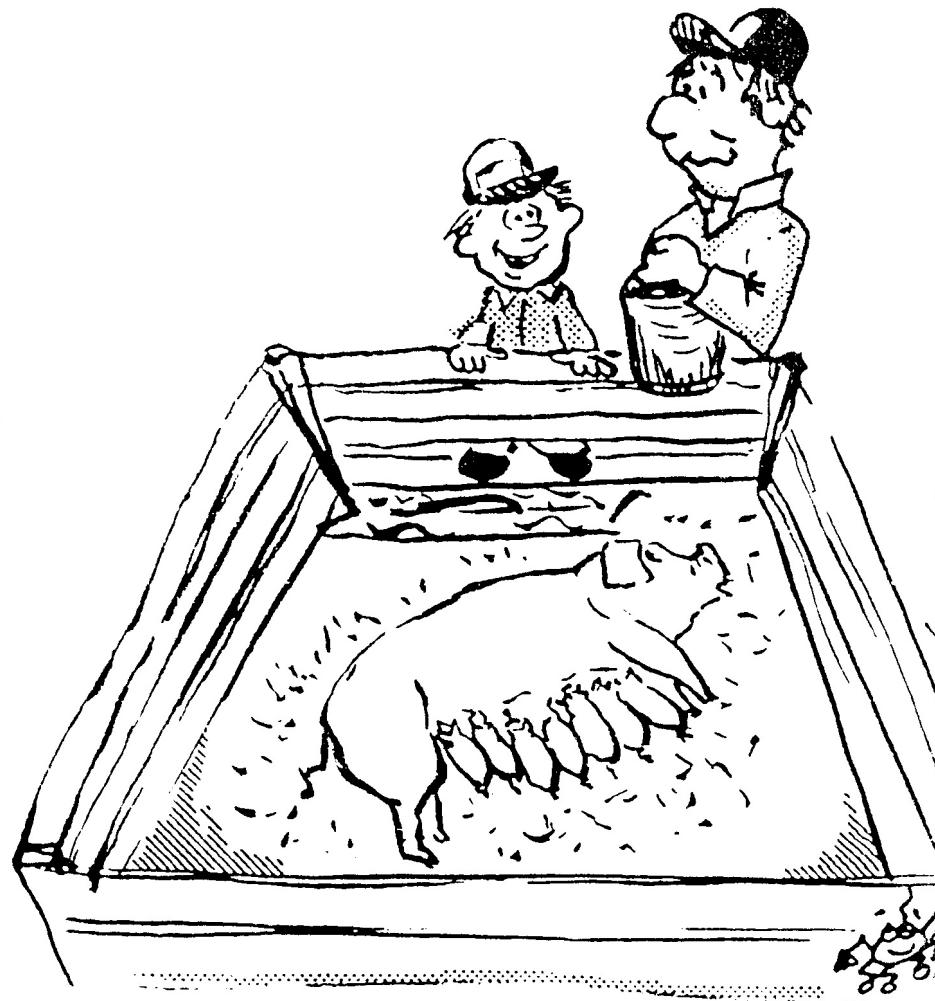
Gestation Stalls

- Individual feeding according to body condition
- No fighting to establish pecking order
- Easy to vaccinate, pregnancy test, etc.
- Individual observation
- Sows can not turn around
- Stereotypical behaviors eg bar biting

Hawai`i Pig Pen



Good Nutrition = Good Production



*Gee Dad, Maybe you should start feedin' that
slop to the cows . . .*

Sow Condition Score



1

2

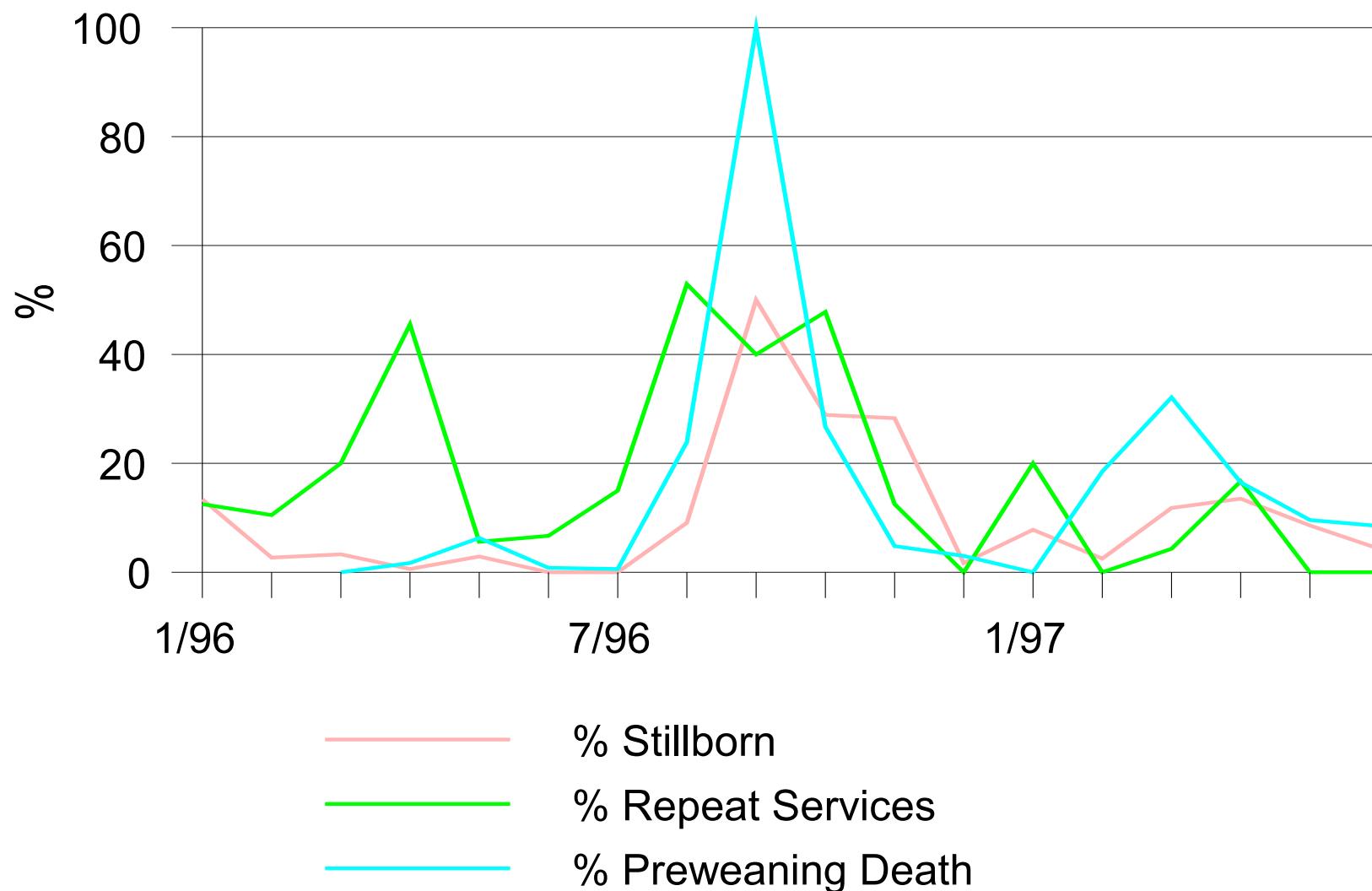
3

4

5

Source: Elanco

Effect of PRRS



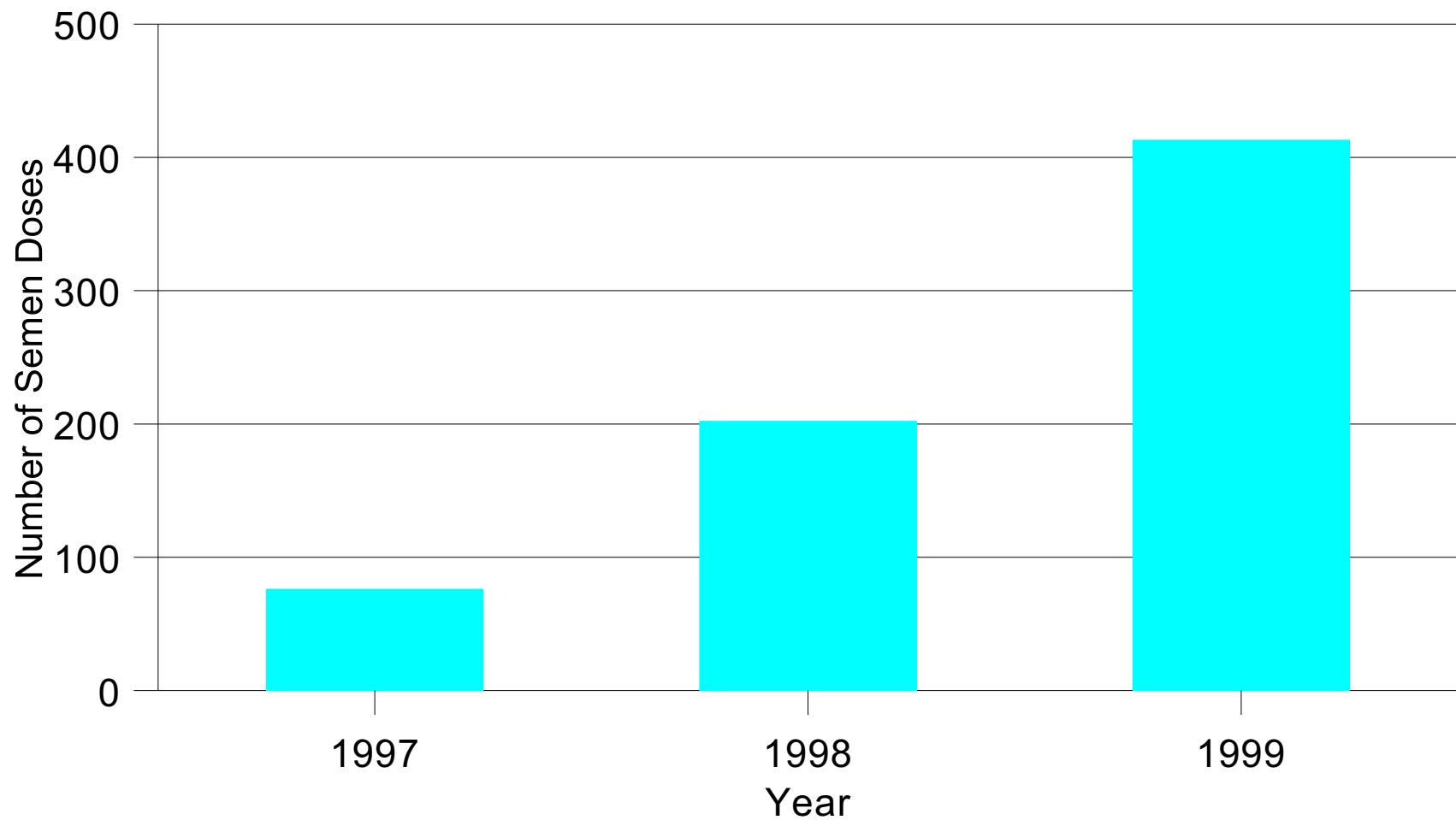
Mating Types

- Pen Bred
- Hand Mated
- Artificially Inseminated

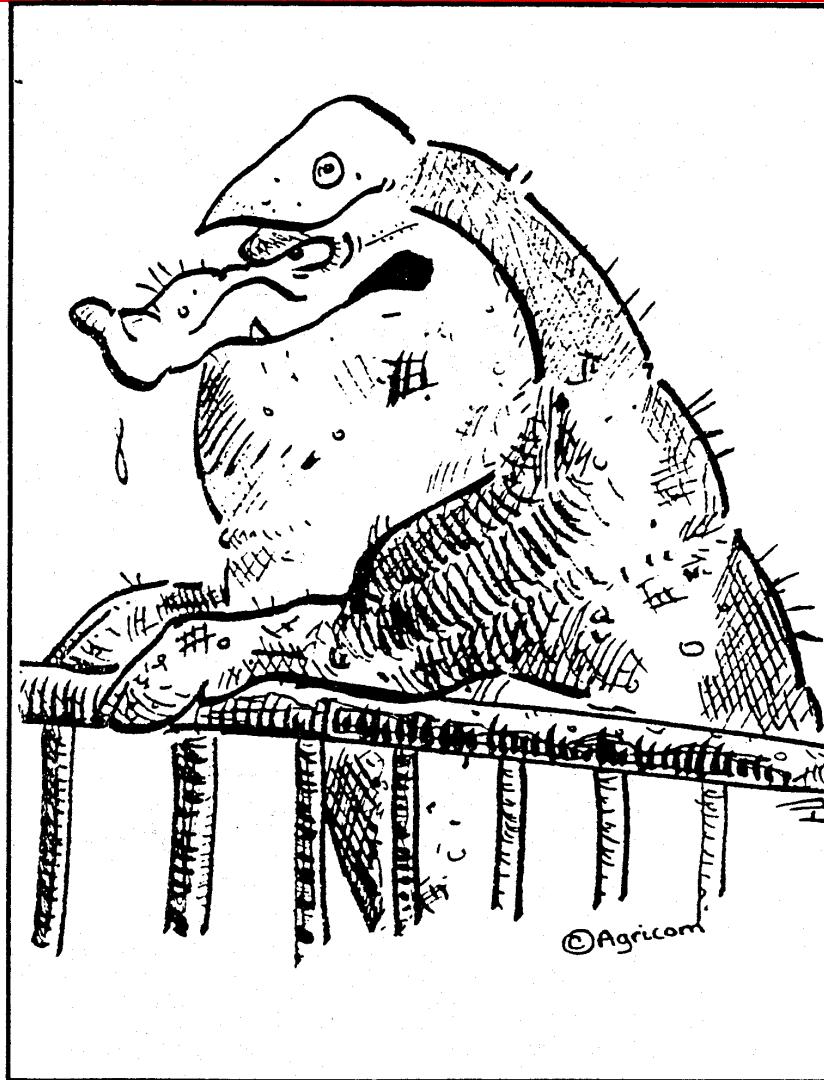
Artificial Insemination



Use of Artificial Insemination in Hawai`i

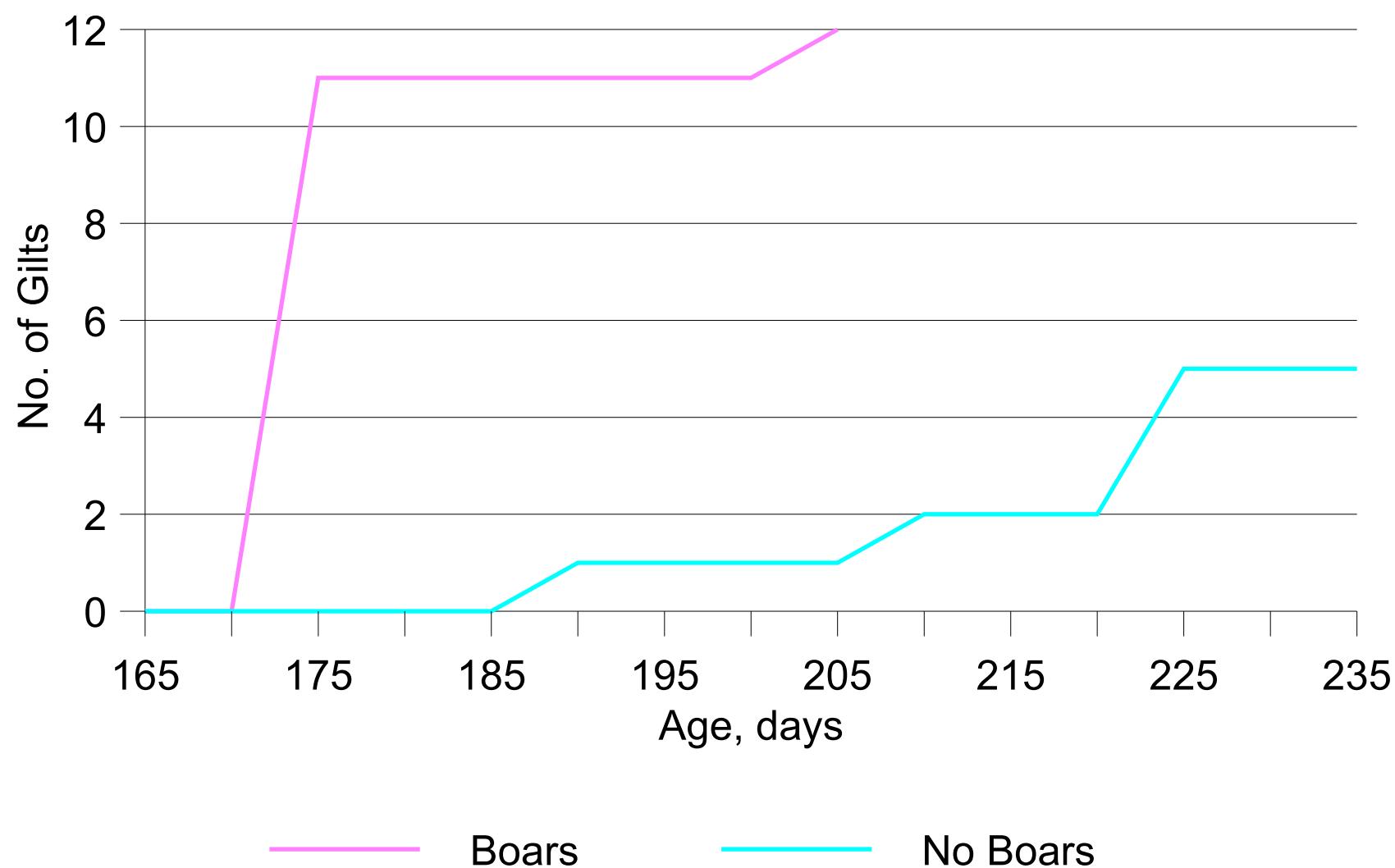


Boar Exposure

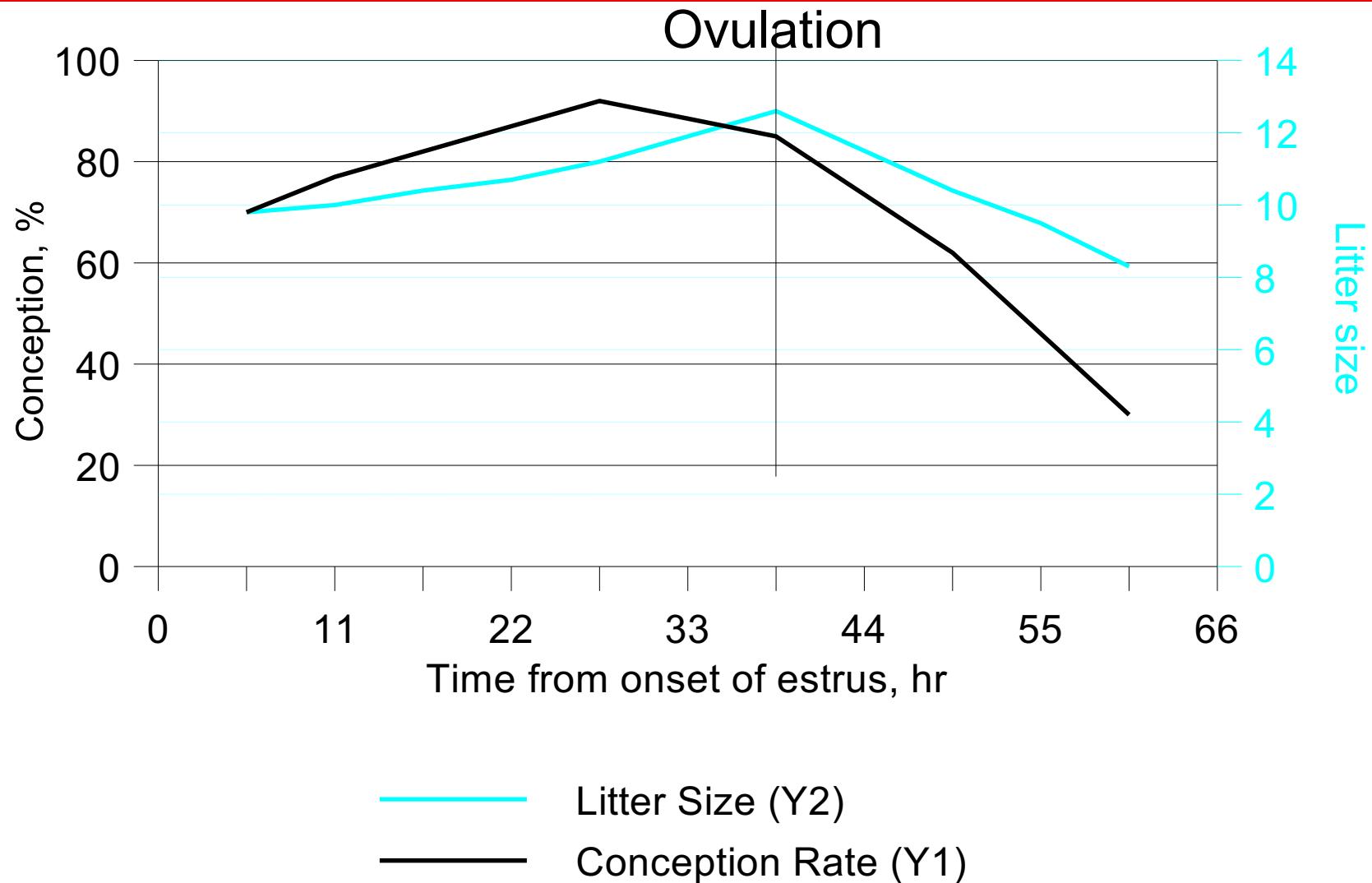


"I'm tired of being just another pretty face around here!!"

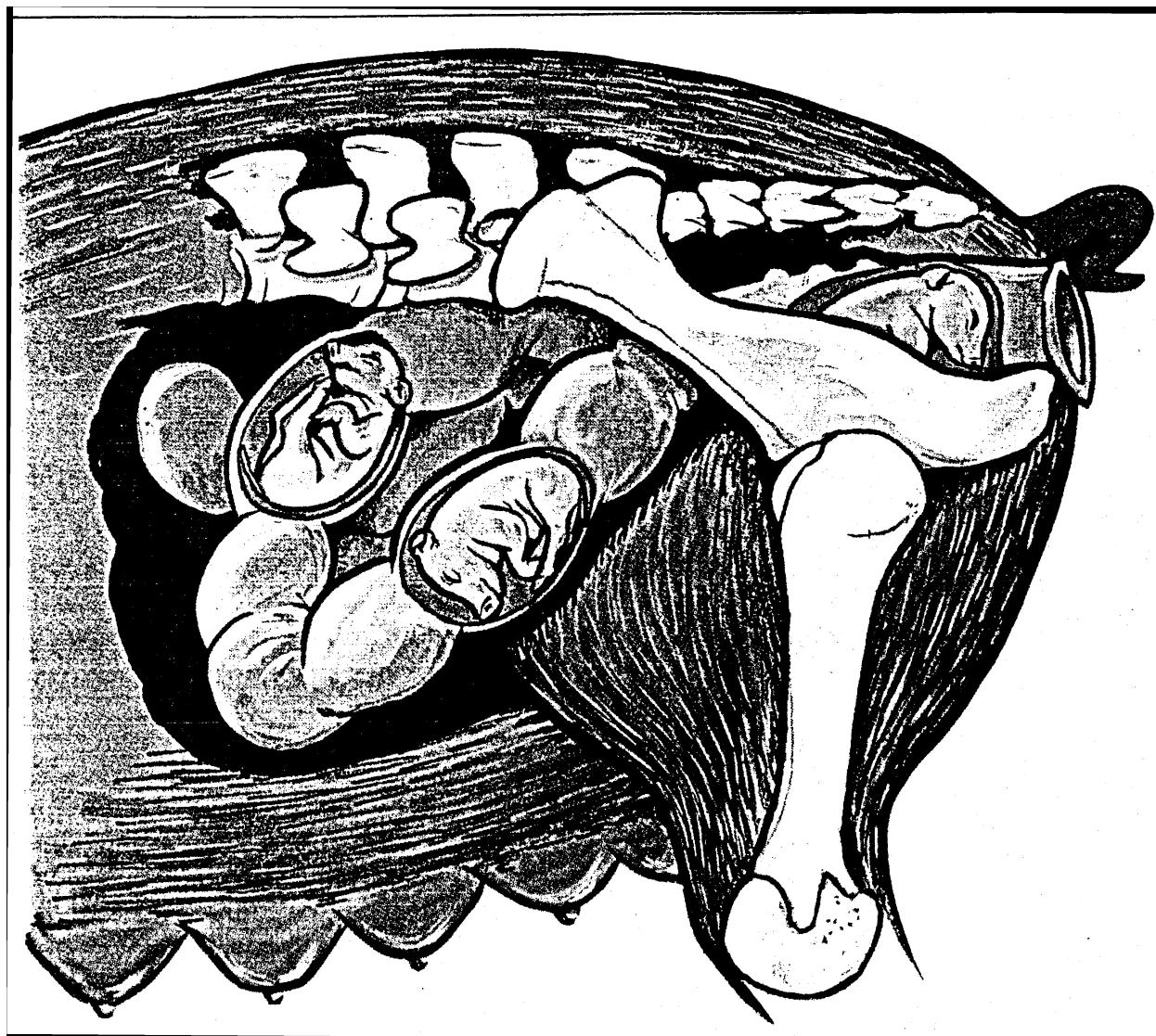
Effect of Boars on Gilt Estrus



Timing of Mating



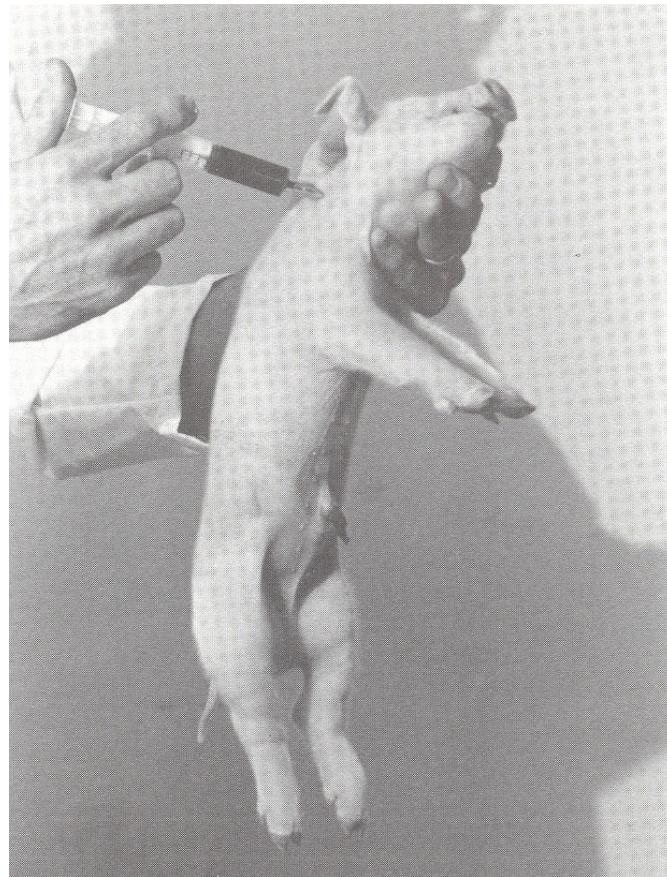
Parturition



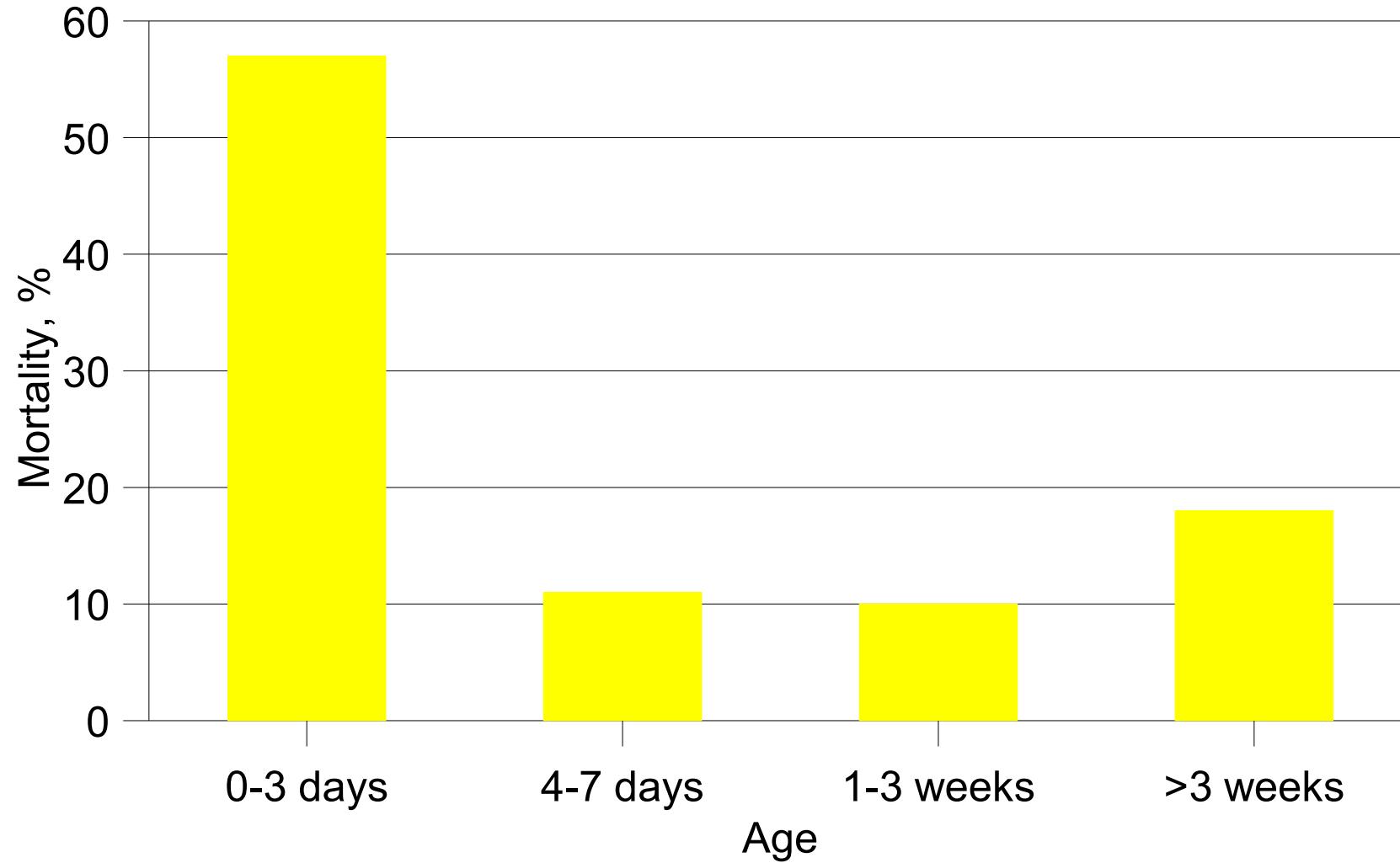
Baby Pig Care

- Colostrum
- Needle teeth
- Tails
- Iron
- Ear notch
- Cross-foster
- Castrate

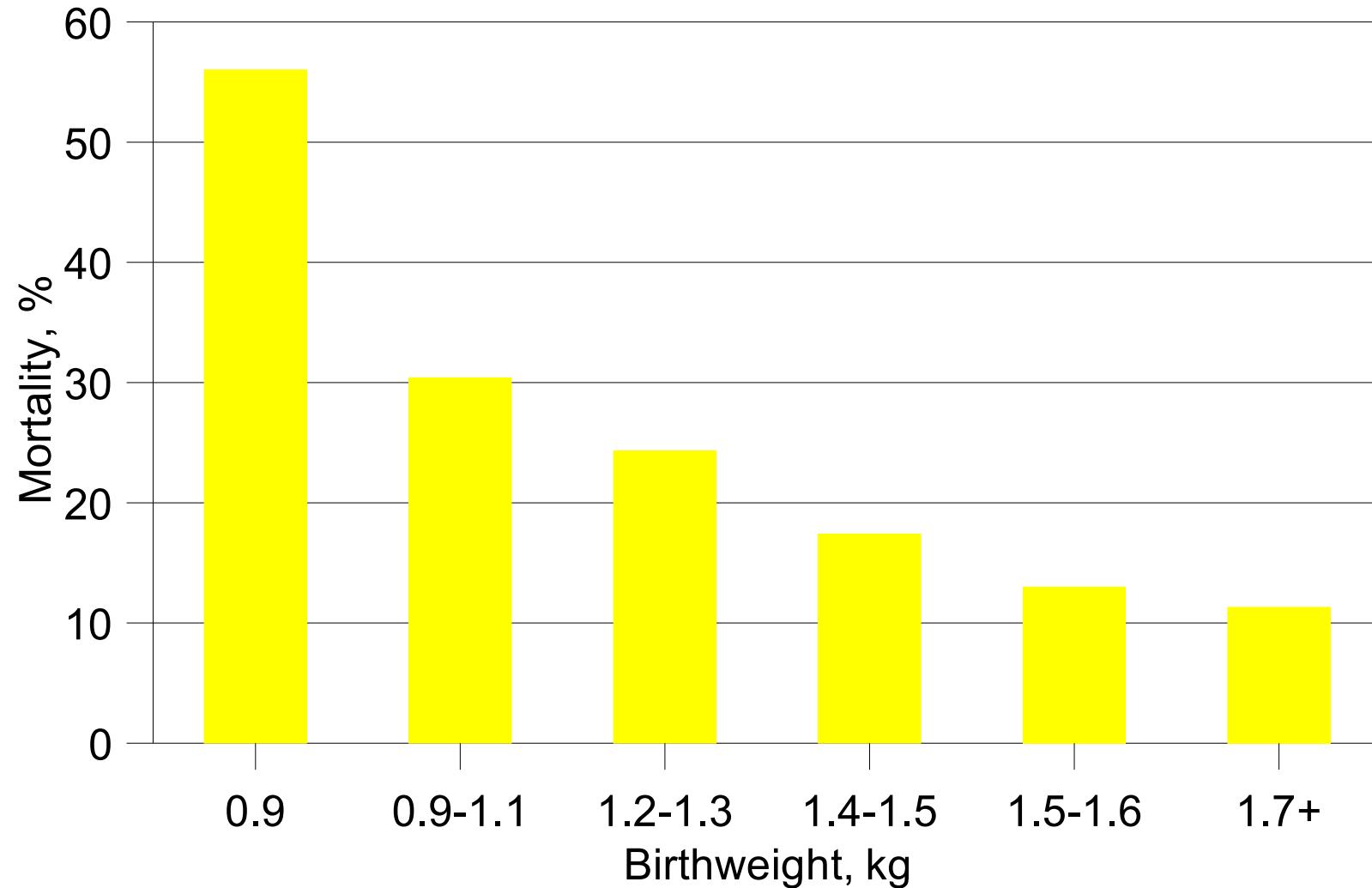
Iron Injection



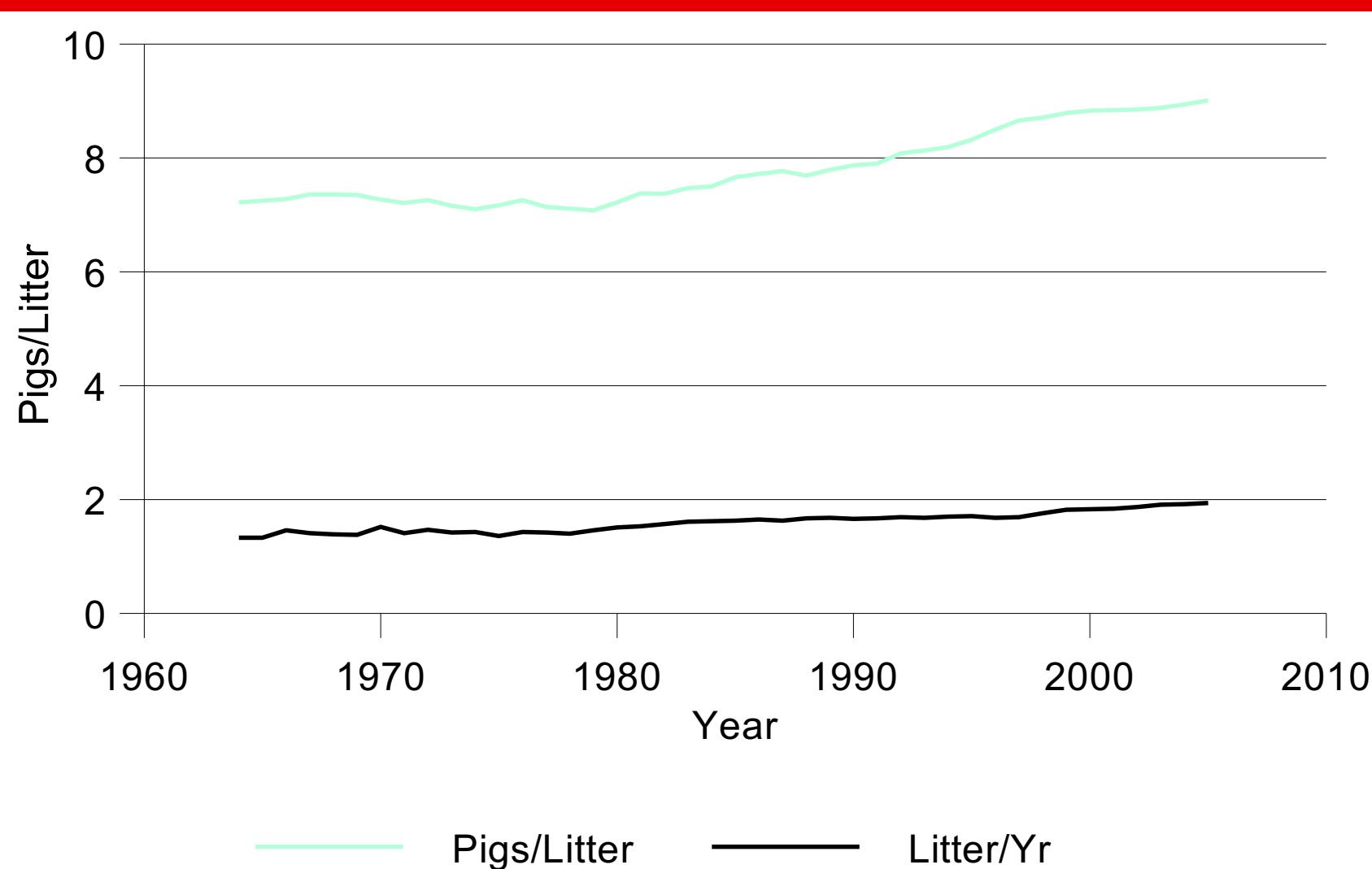
Preweaning Mortality



Preweaning Mortality



US Pigs Weaned



Source: National Pork Board

Basis of Farming

- Nature: 90% loss, 10% live to breed
- Nurture: 10% loss, 10% needed to breed,
and 80% go to market

Sustainable Agriculture

“Sustainable agriculture would be a food production and distribution system that meets the needs of the present generation without compromising the ability of future generations to meet their needs.”

- Brundtland Commission

Changes in Pork Production

Ontario 1951 - 1991

Animal Efficiencies	1951	1991
Pigs/Sow/Year	6.2	12.13
Market Weight (lb)	190.4	220.4
% Carcass Yield	78	80
% Lean	48	50.5

Source: Surgeoner and Dalrymple, 1993

Land Required to Meet Pork Demand

	1951	1991
Lean Pork Demand	86.9	158.8
Feed/Lean Pork	16.1	9.8
Land Base (acres)	1,796,000	916,000

Land Required Using 1951 Methods
3,285,000

Source: Surgeoner and Dalrymple, 1993