

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

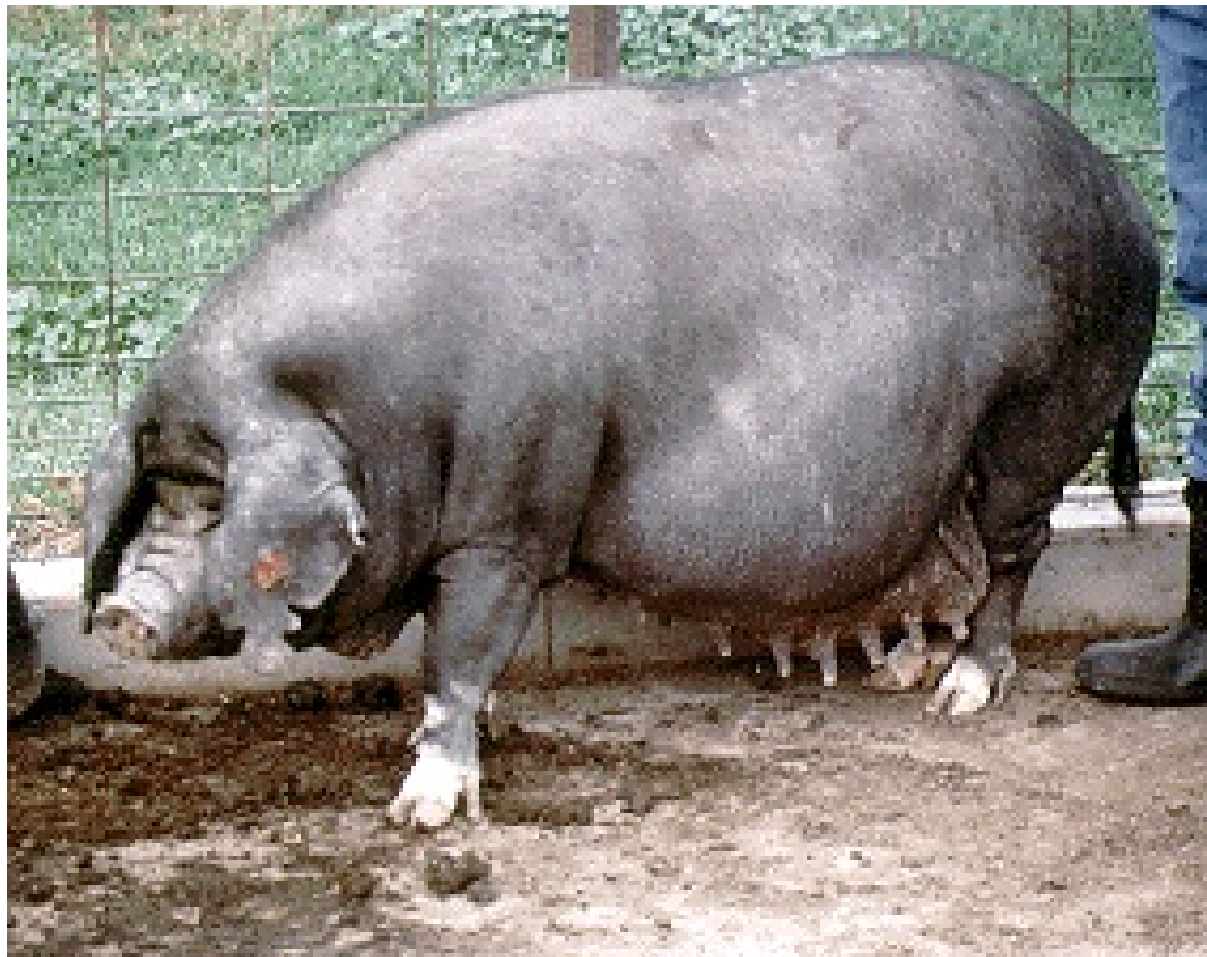


Duroc

Hampshire



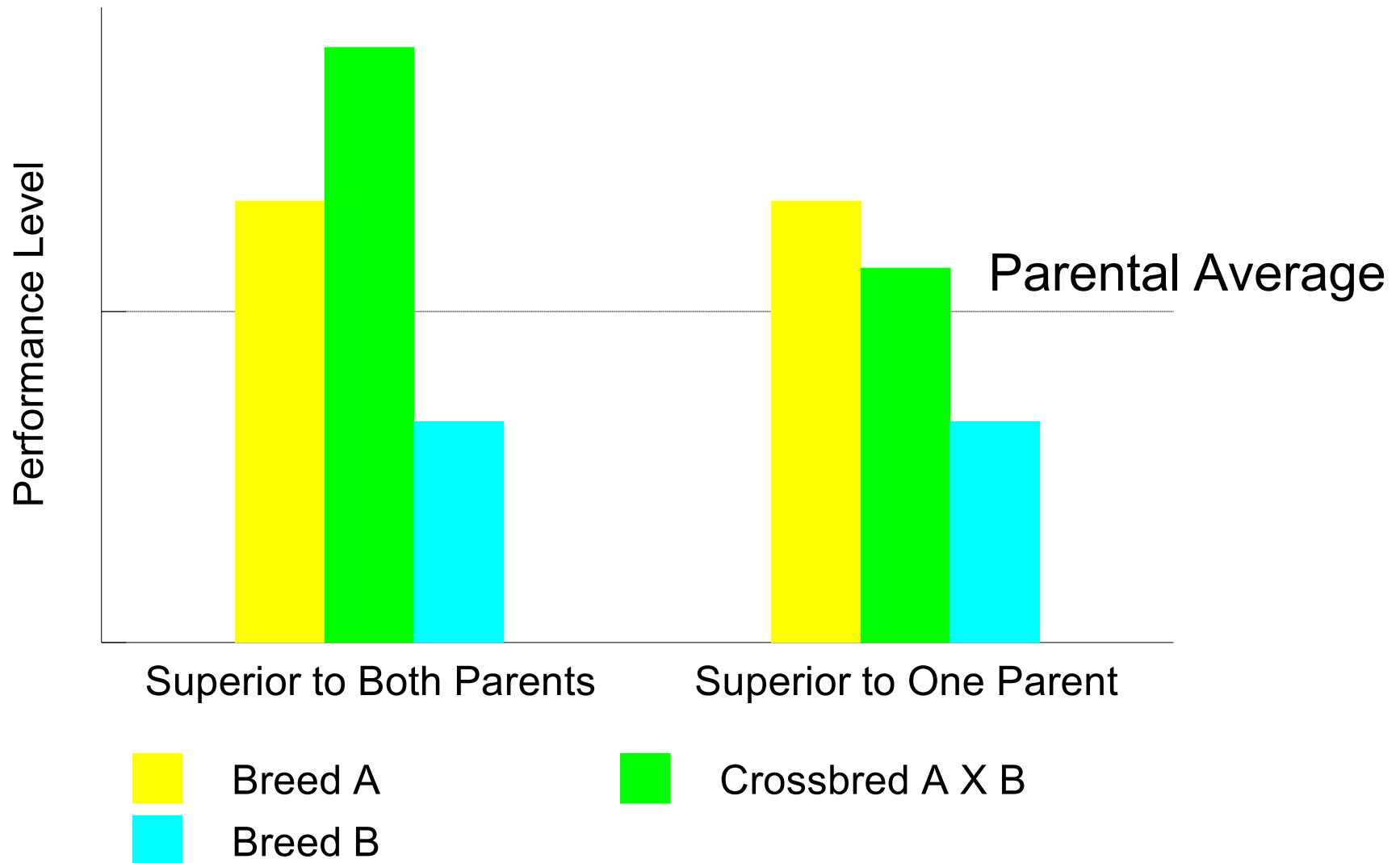
Meishan



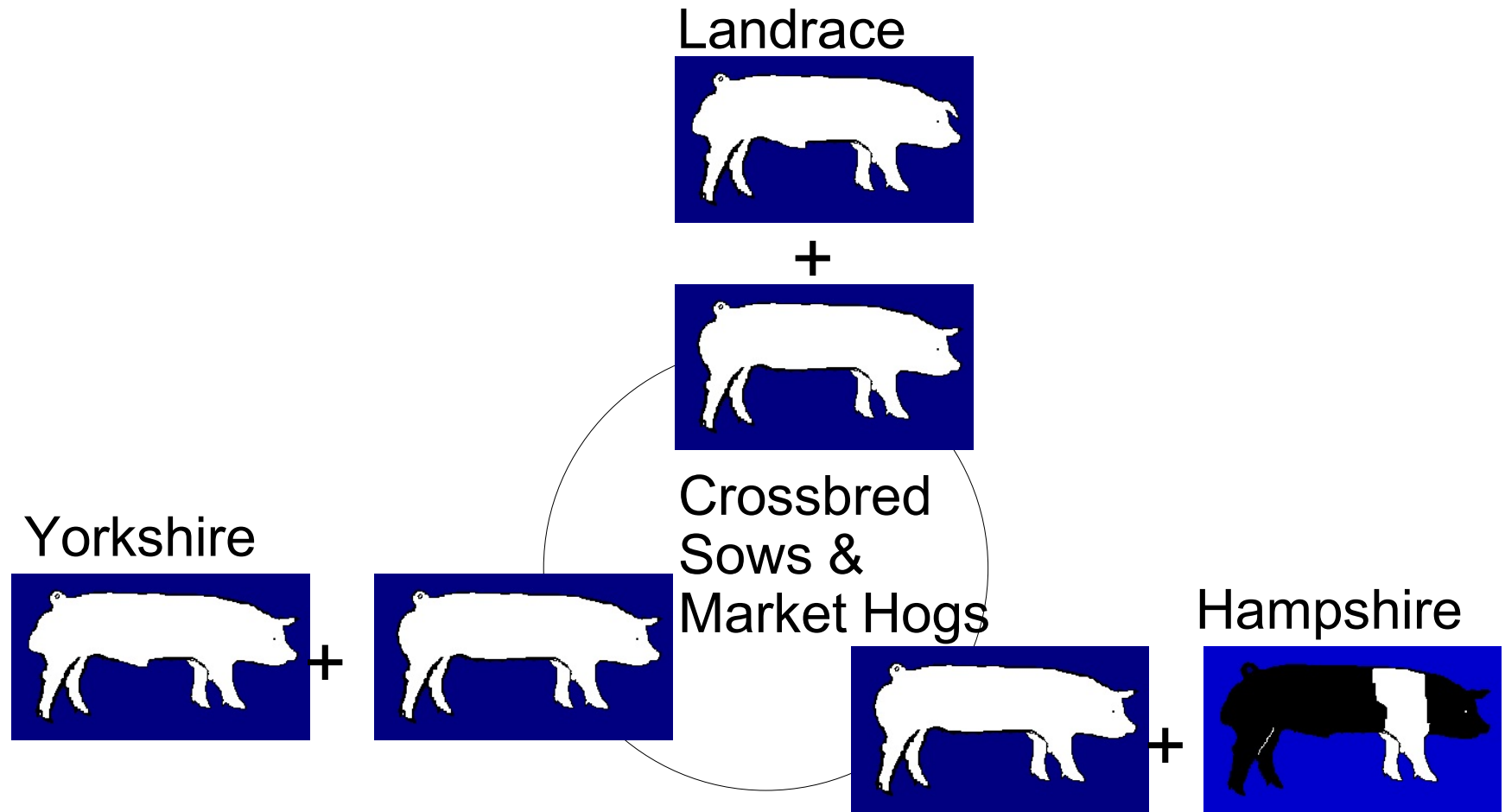
Basis for Improving Traits

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

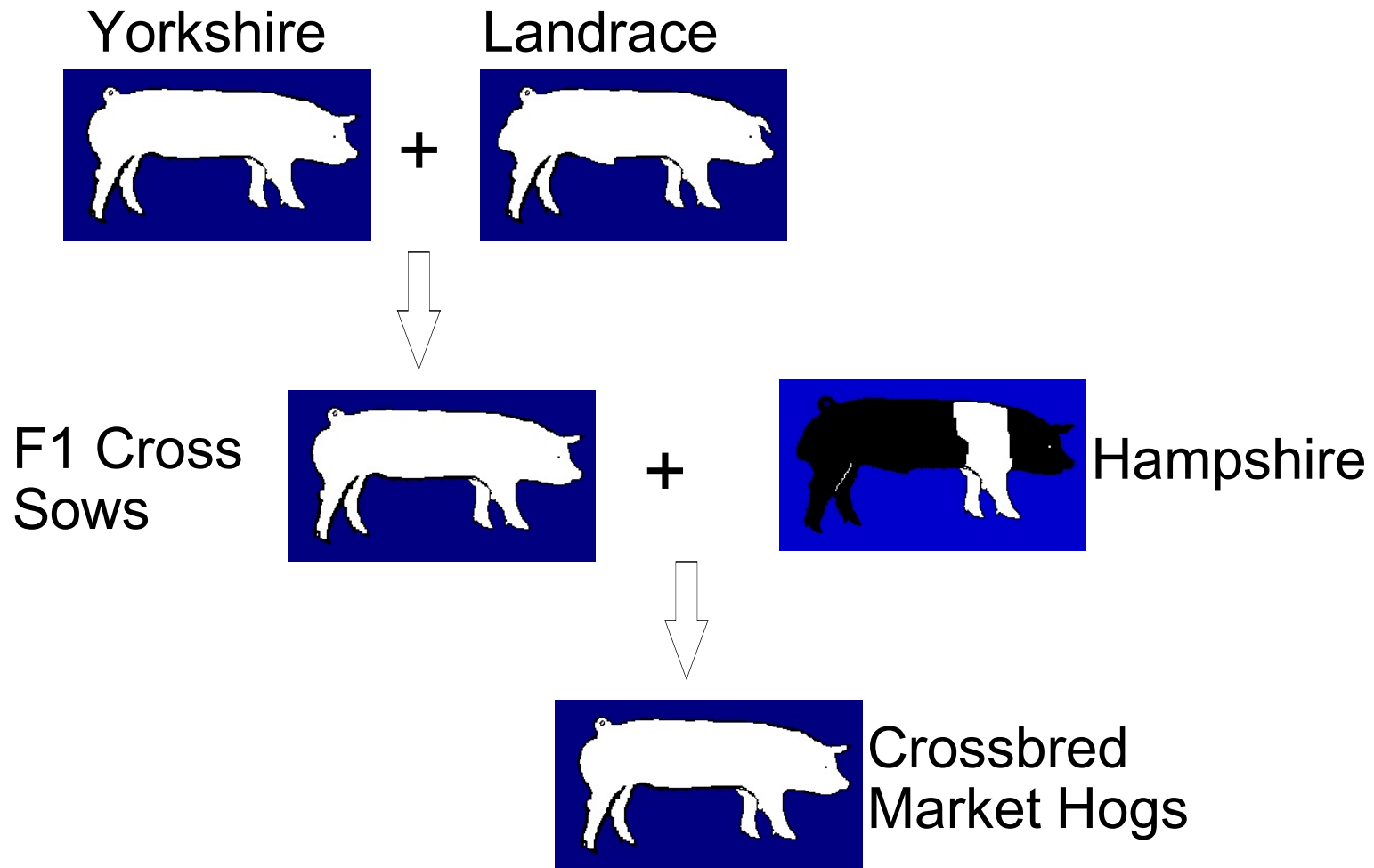
Heterosis



Rotational Crossing



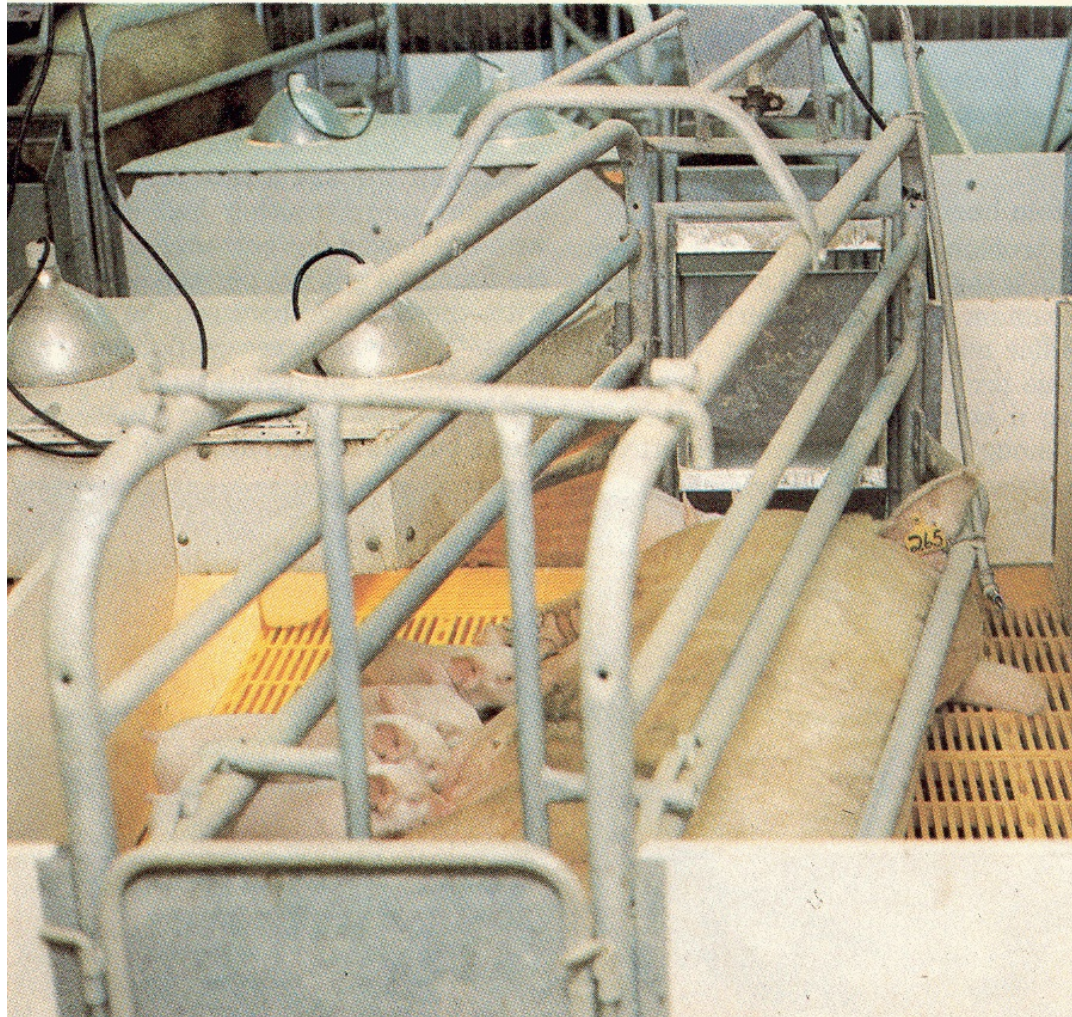
Terminal Crossing



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

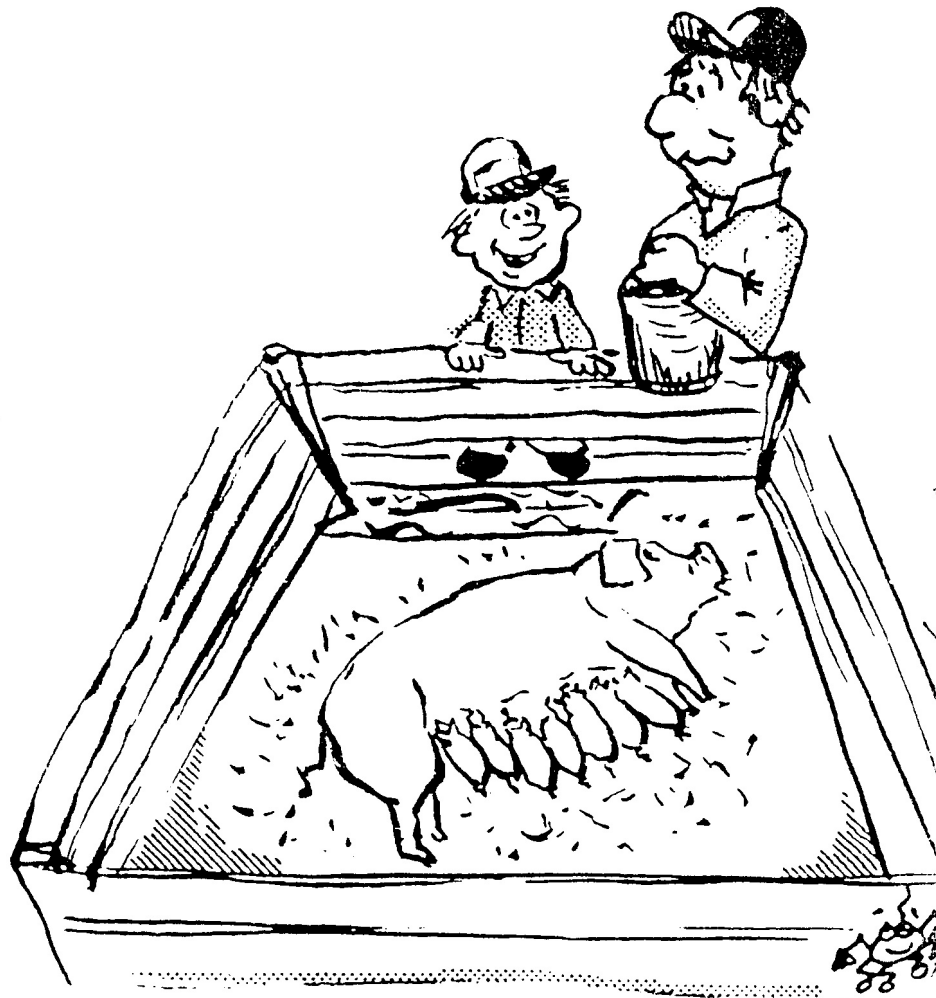
Sows can not turn around

Stereotypical behaviors eg bar biting

Hawai`i Pig Pen

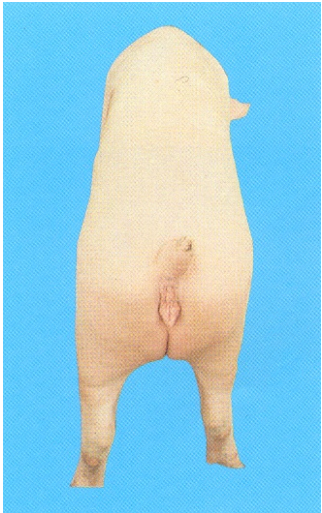


Good Nutrition = Good Production

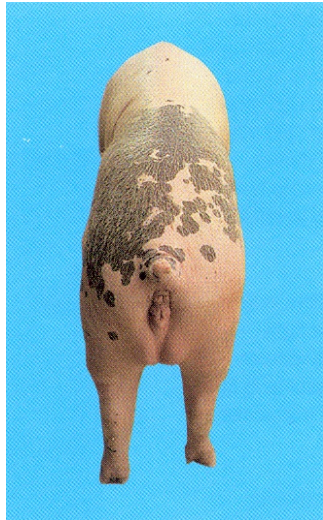


Gee Dad, Maybe you should start feedin' that slop to the cows . . .

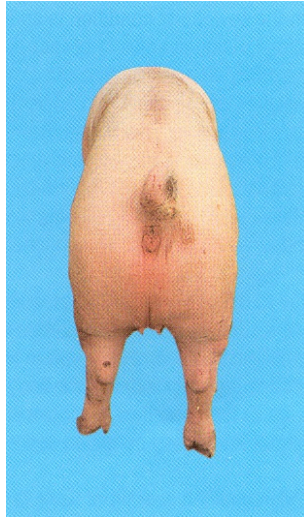
Sow Condition Score



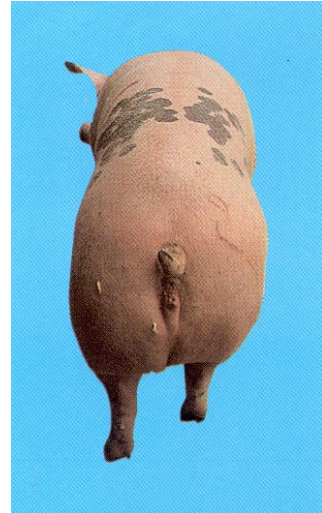
1



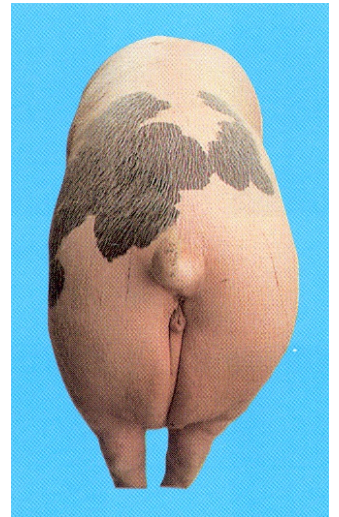
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3



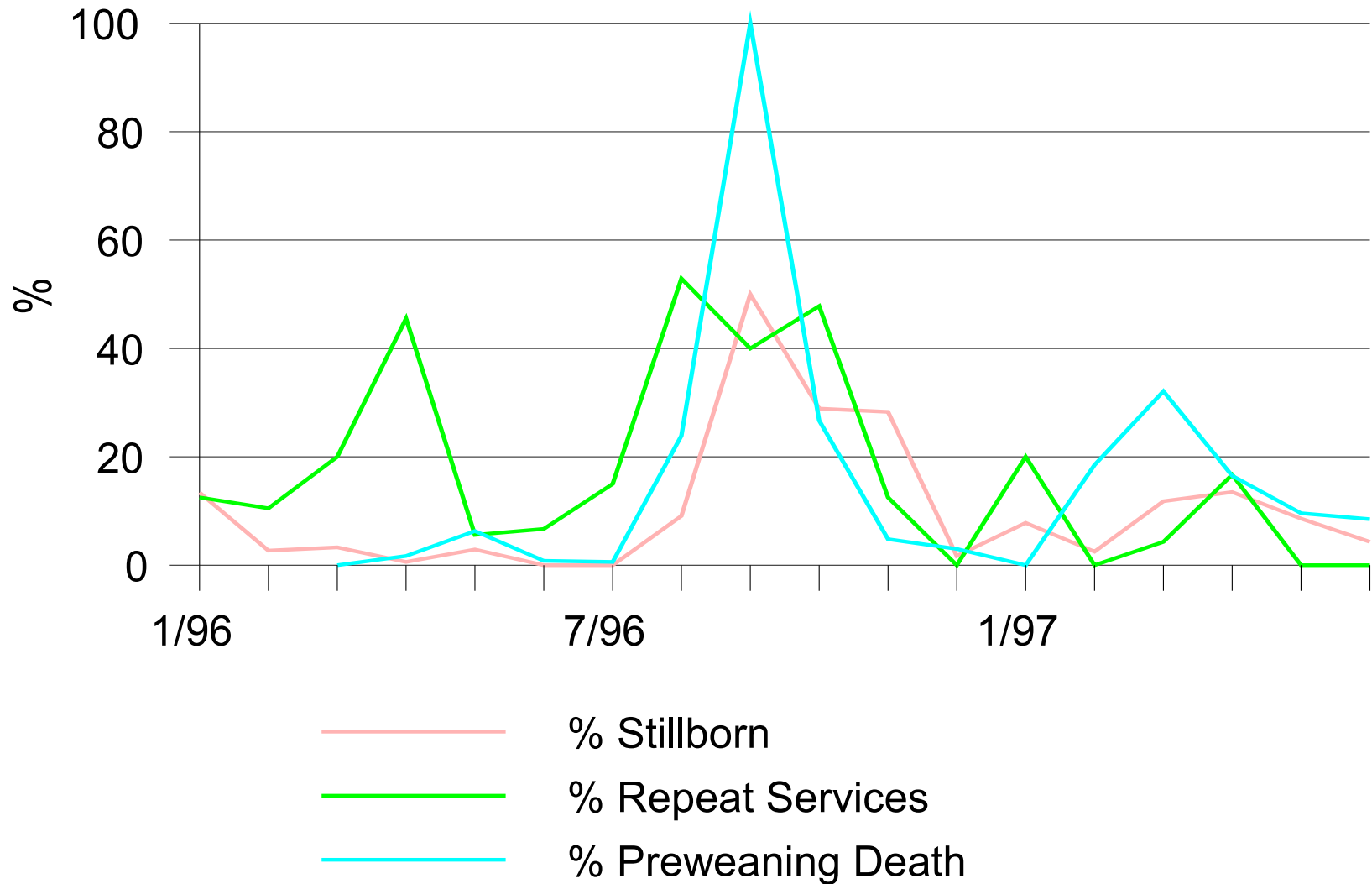
4



5

Source: Elanco

Effect of PRRS



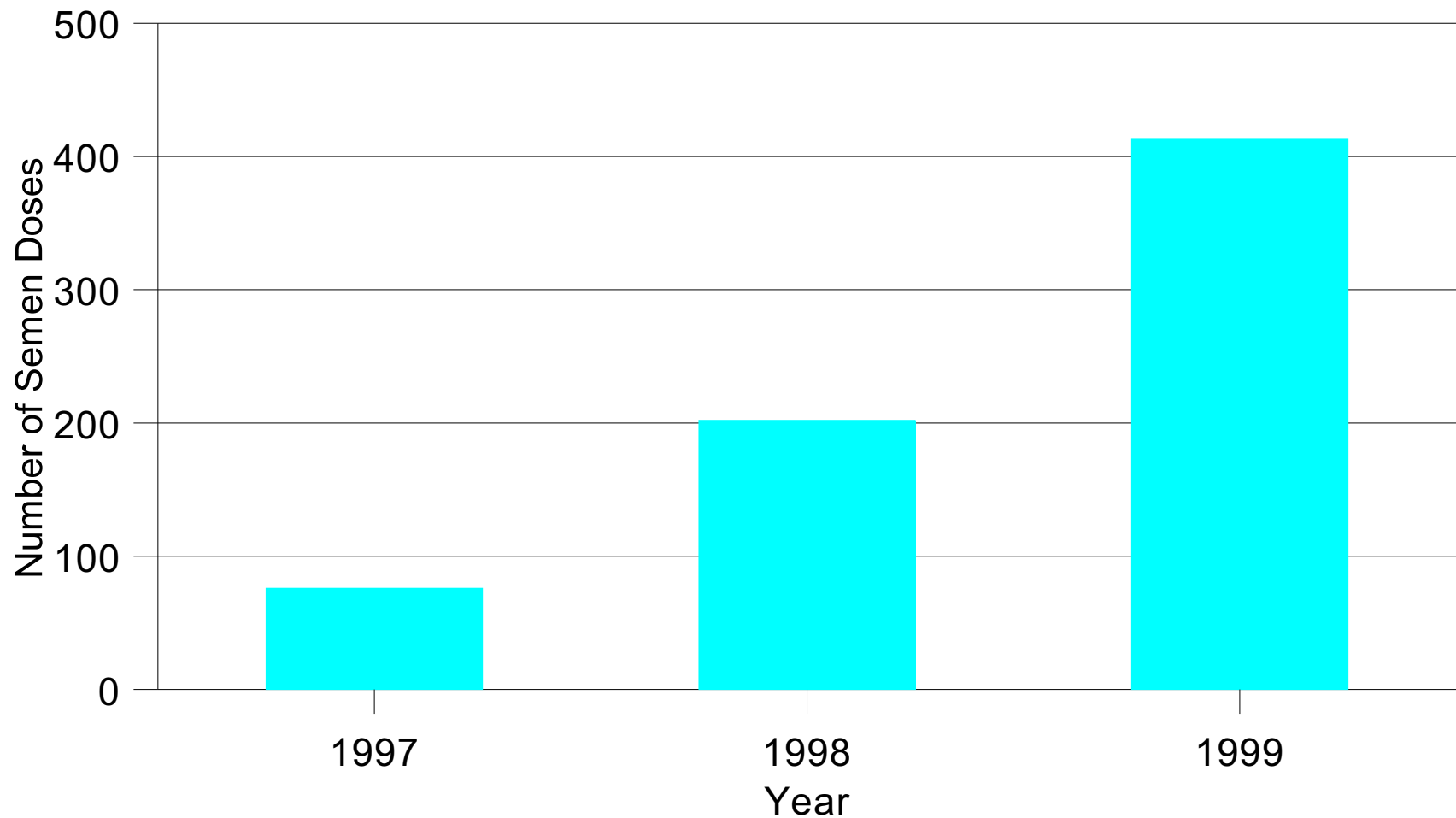
Mating Types

- Pen Bred
- Hand Mated
- Artificially Inseminated

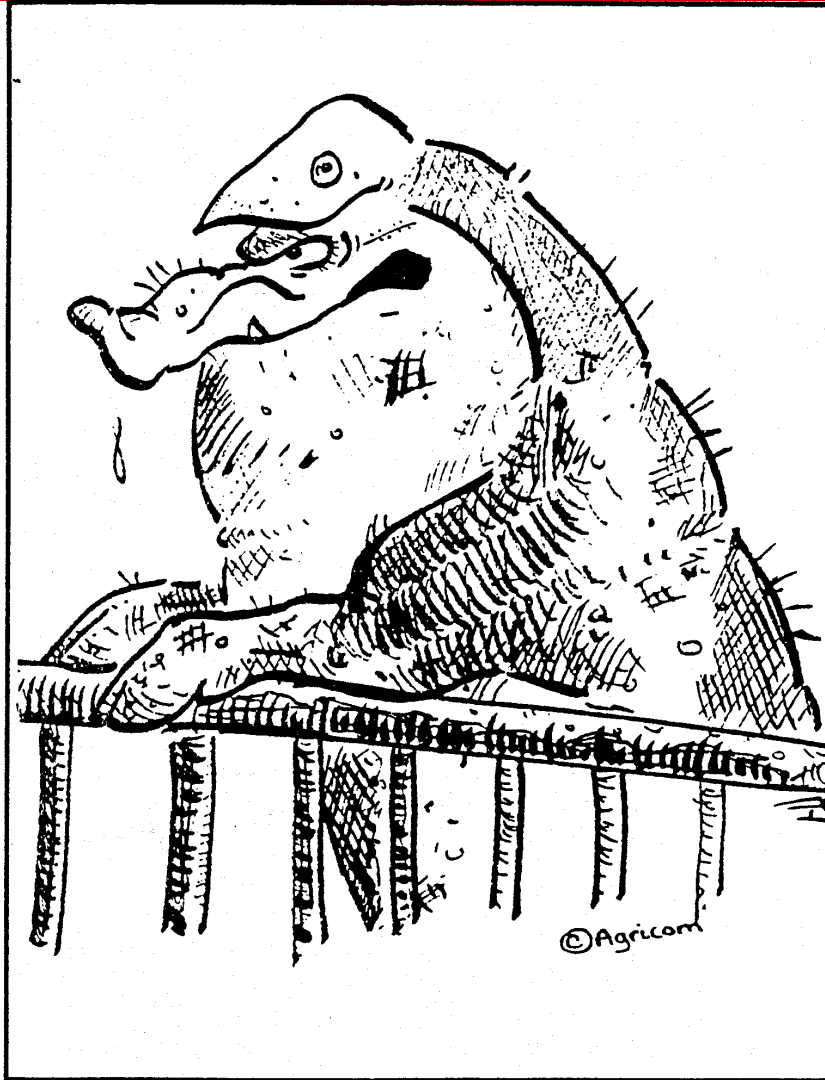
Artificial Insemination



Use of Artificial Insemination in Hawai`i

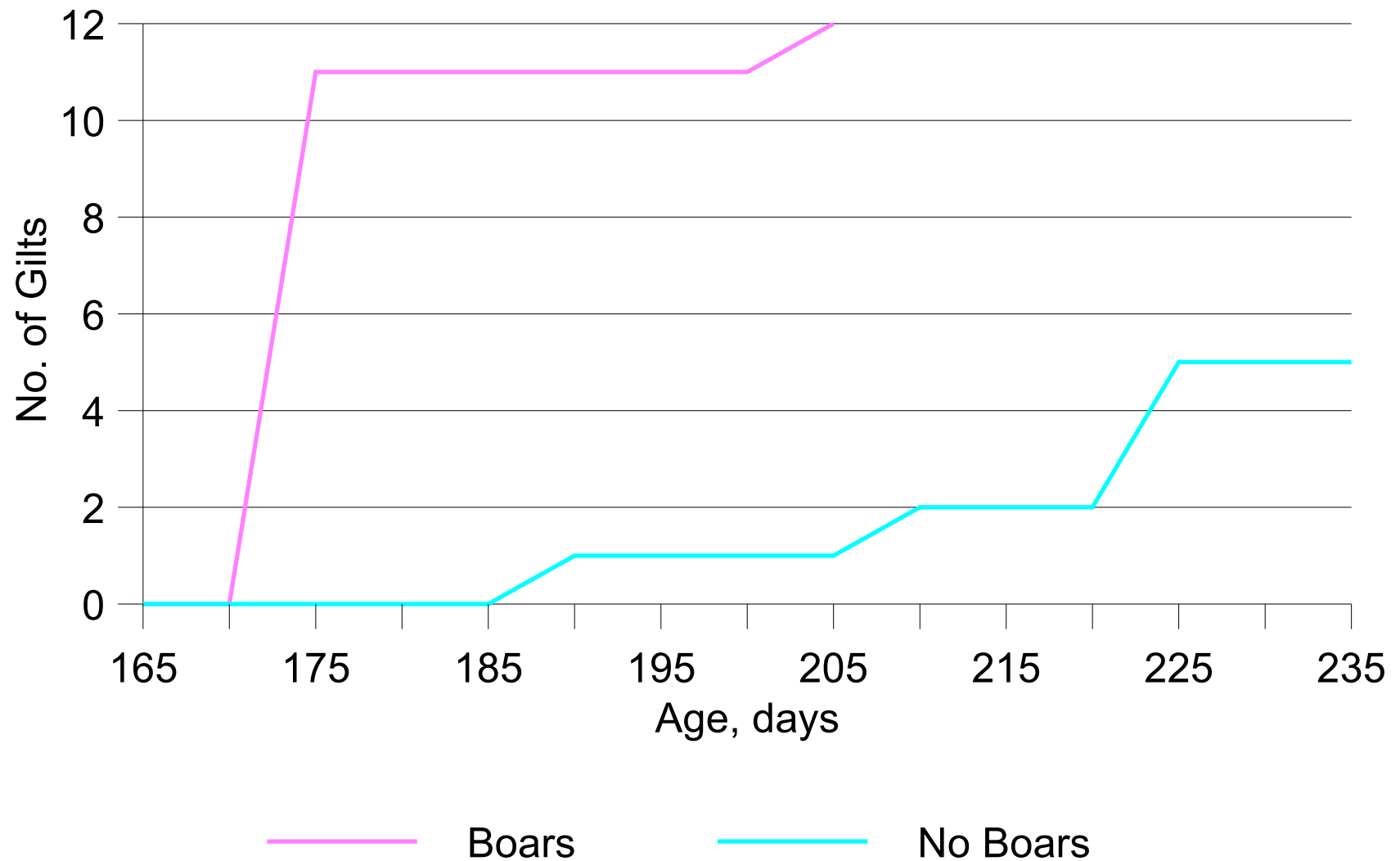


Boar Exposure

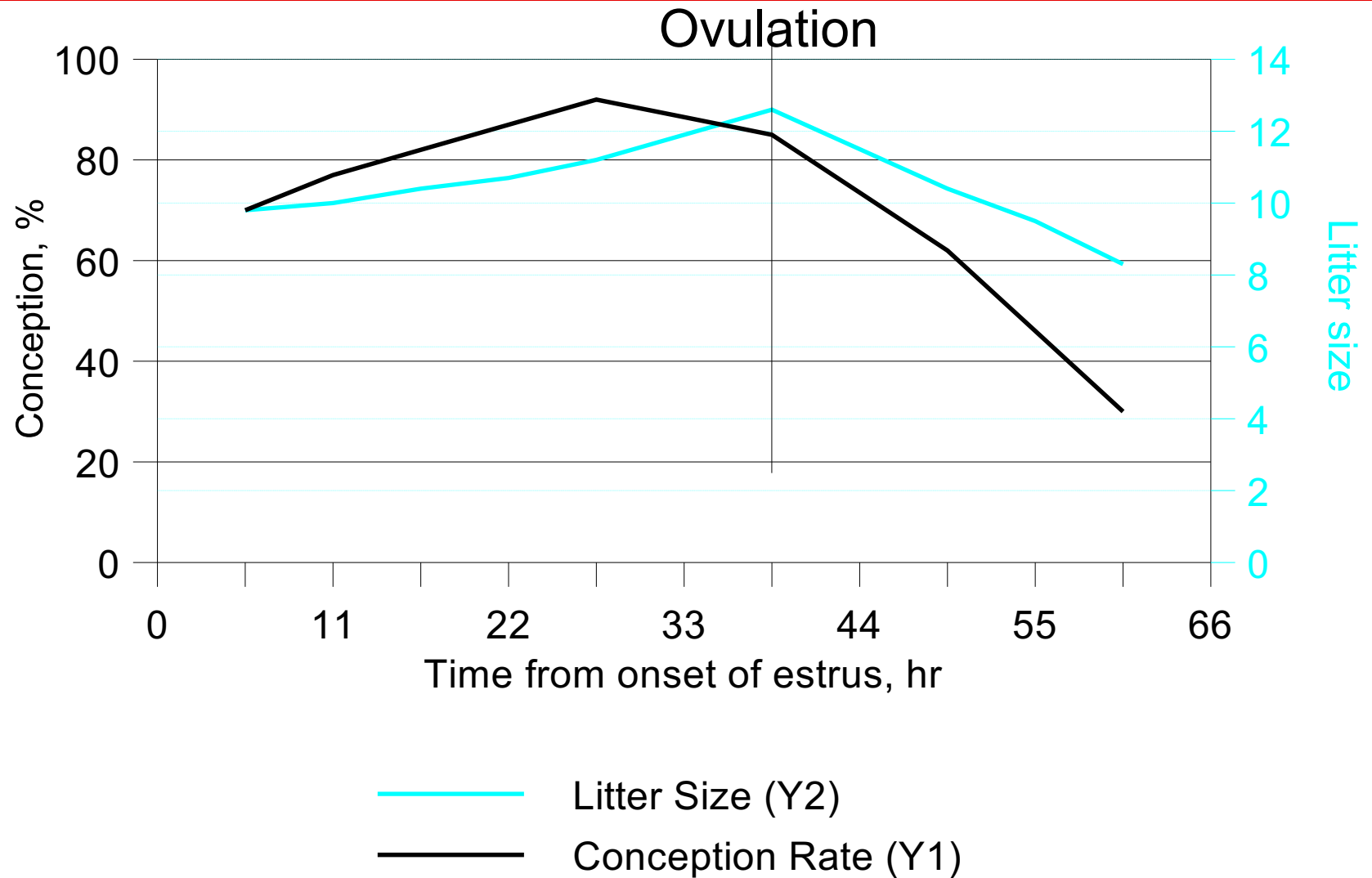


"I'm tired of being just another pretty face around here!!"

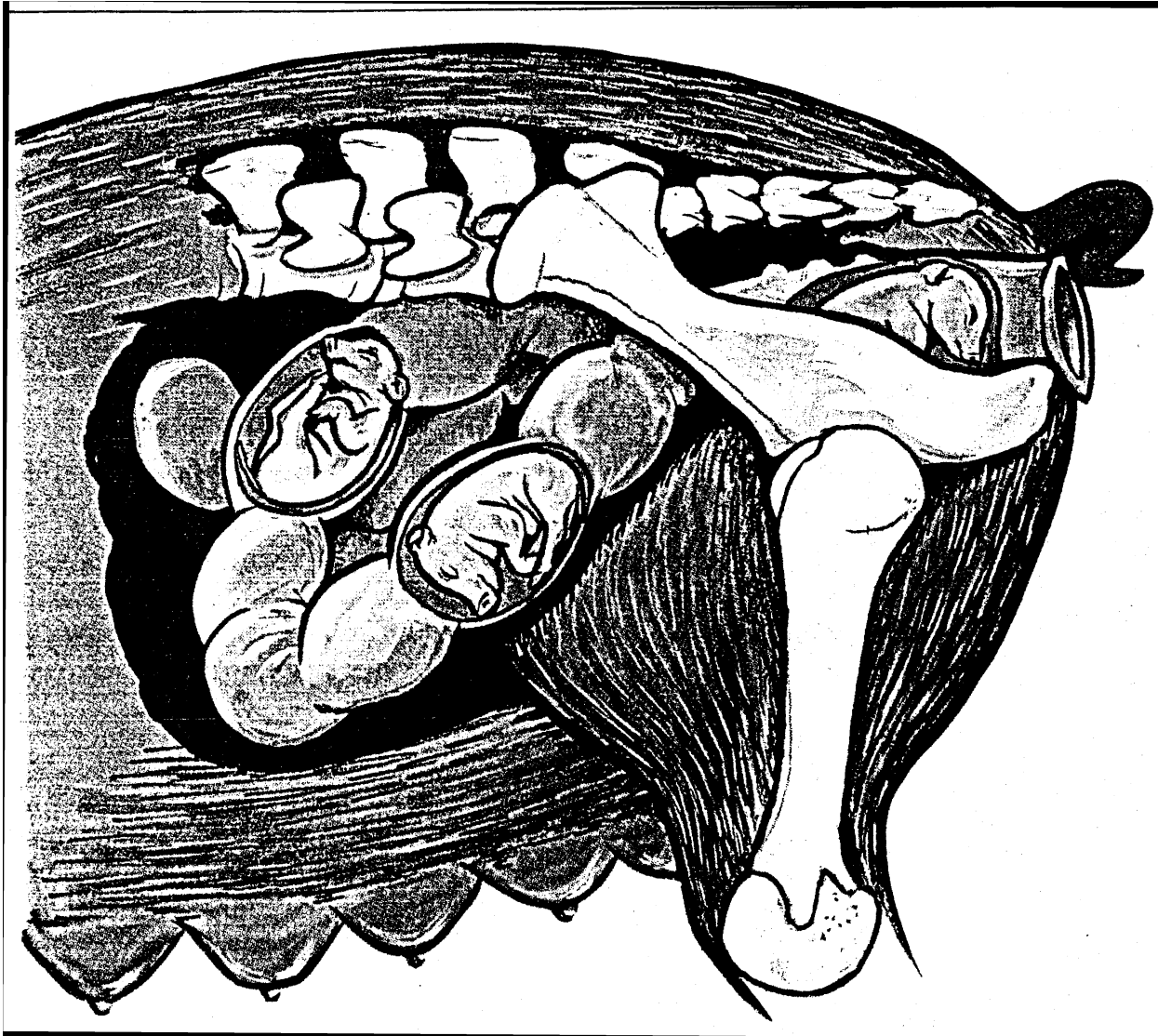
Effect of Boars on Gilt Estrus



Timing of Mating



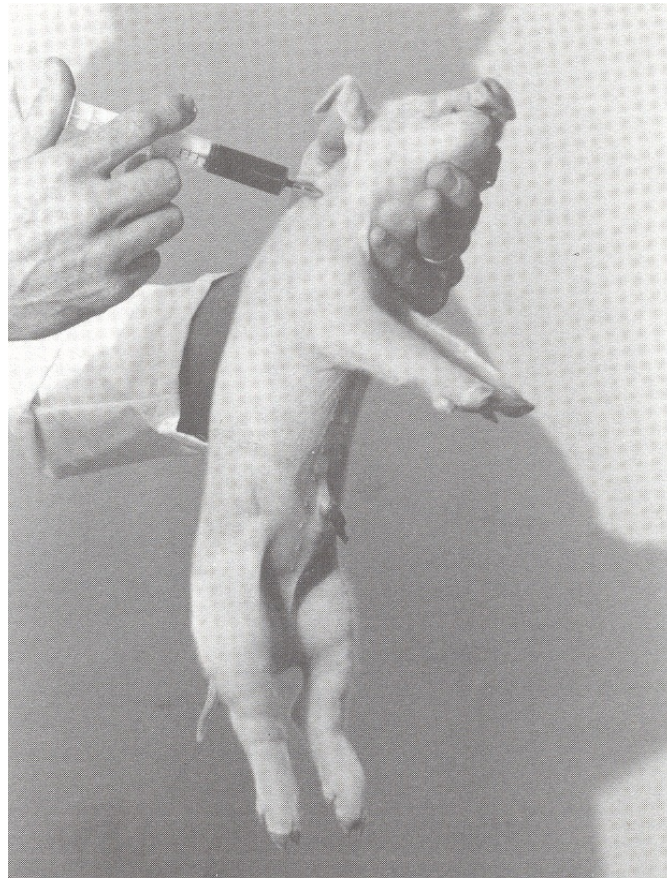
Parturition



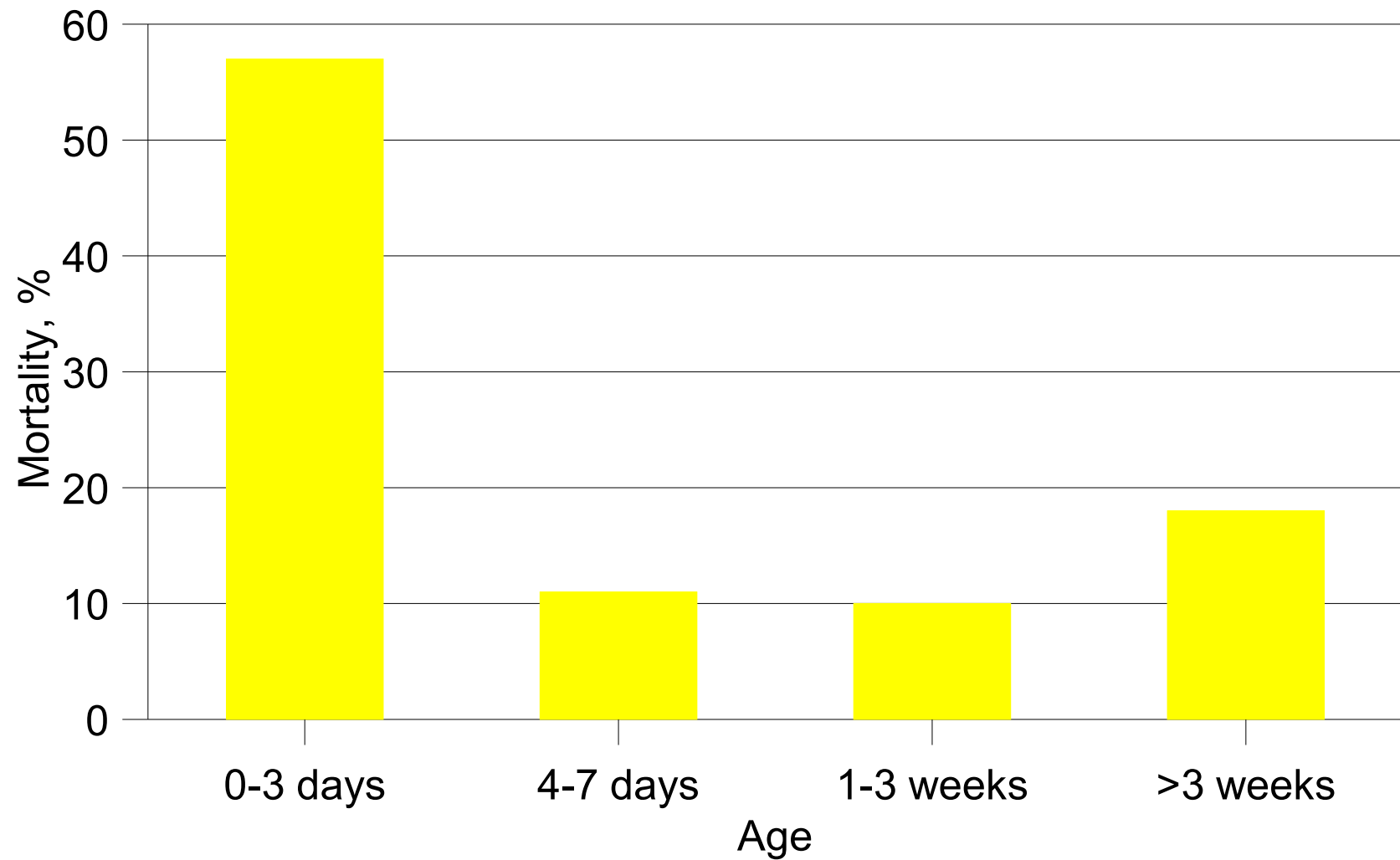
Baby Pig Care

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

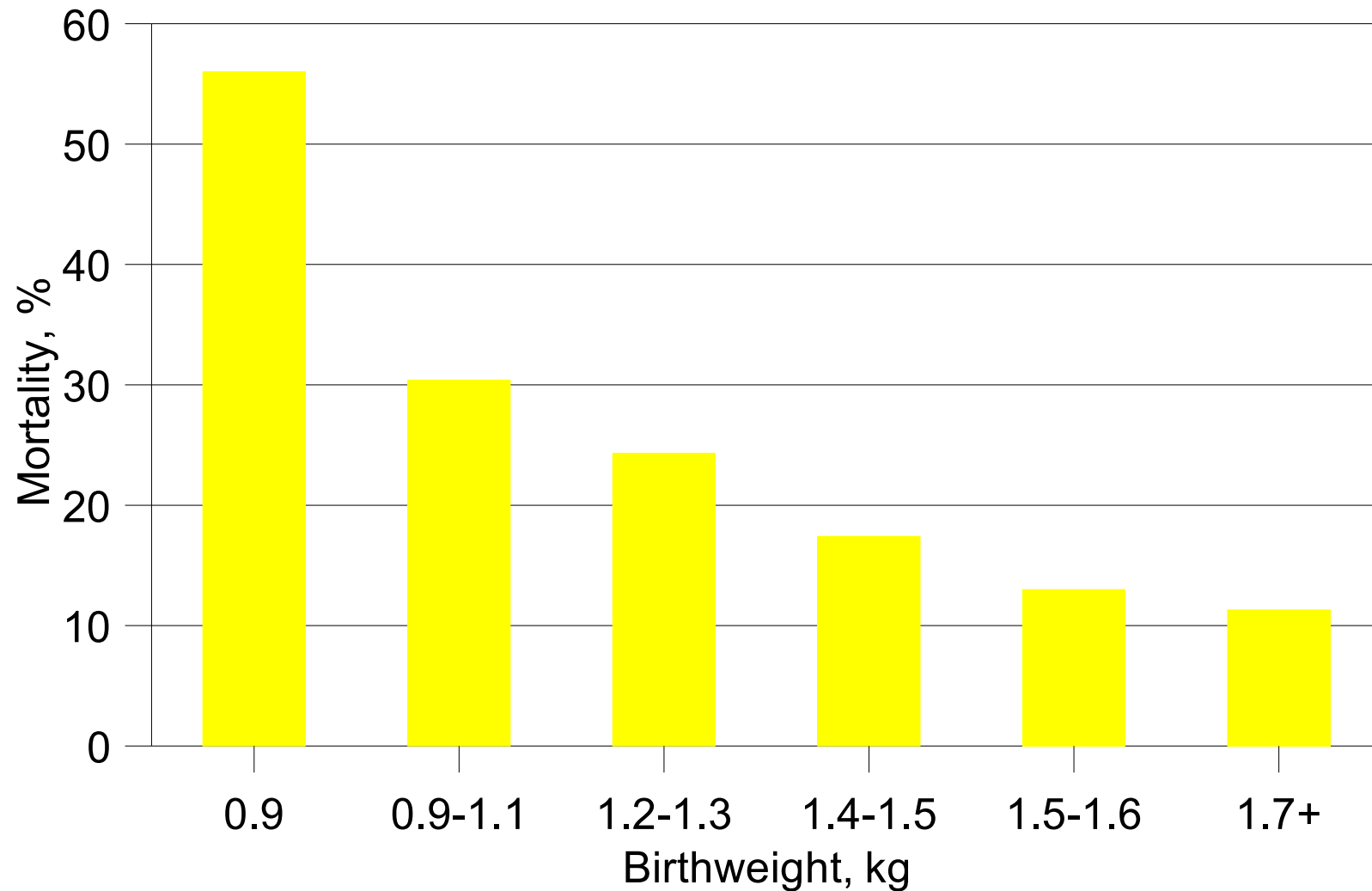
Iron Injection



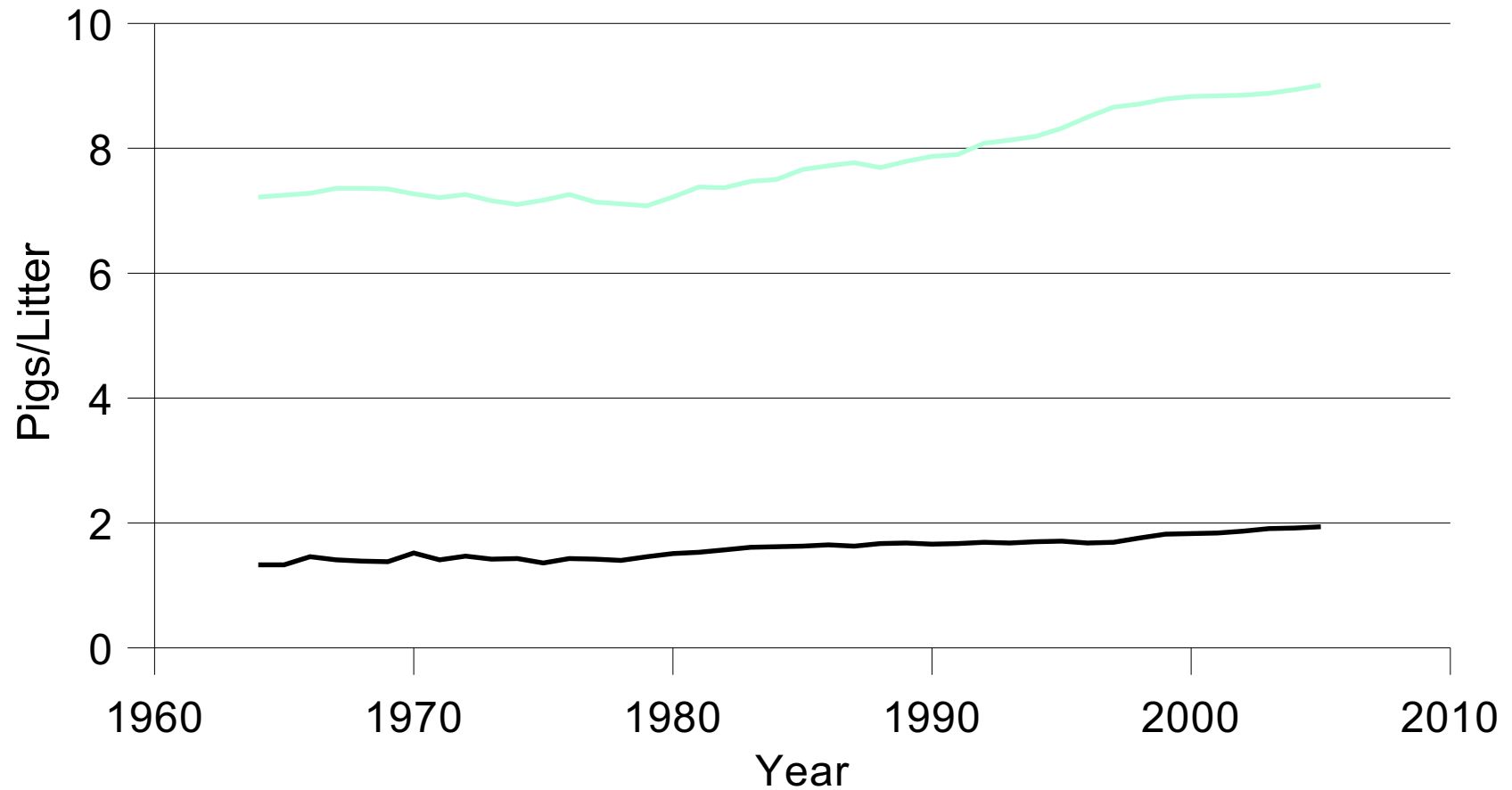
Preweaning Mortality



Preweaning Mortality



US Pigs Weaned



— Pigs/Litter — Litter/Yr

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