

# LABORATORY SWINE

## Care and Feeding

### Experimental Conditions

Space dimensions vary with each experiment according to animal size and management program. Refer to NCR guidelines.\*

### Feeding Recommendations

#### Daily Feed Usage

Approx. 2-3% of body weight, but varies with phase of life cycle (see specific product for other details).

#### Water Requirement

Ad libitum

#### Begin Dry Food Consumption

12-16 days

### Environmental Data

#### Room Temp.

Ambient conditions  
10-25 °C

#### Humidity

45-55%

#### Light

8-14 hrs./day

#### Litter Material

As needed, straw, hay, shavings ground cobs, paper beddings. Avoid shredded newspapers.

## Biological Values

### Blood Chemical Composition

#### Water

79.1 gm/100ml

#### Calcium

8-12 mg/100ml

#### Sodium

138-150 mEq/L

#### Chloride

100-105 mEq/L

#### Phosphorus

5-9 mEq/L

#### Potassium

5-7 mEq/L

Values are for plasma, except where noted

#### Magnesium

1-3 mg/100ml

#### Cholesterol

130-160 mg/100ml

#### Glucose

65-120 mg/100ml

#### Serum Protein

5-8 mg/100ml

#### Albumin

3-4.5 gm/100ml

#### Globulin

1.5-3.5 gm/100ml

### Vital Data

#### Temperature

39 °C

#### Breathing Rate

30 /minute

#### Heart Rate

145-175 /minute

#### Blood Pressure

130-145/105-110

#### Heat Rate

1.01 kcal/min

### Hematological Values

#### Whole Blood Volume (T-1824 dye)

67 mg/kg body weight

#### RBC Diameter

6.0 microns

#### Blood pH

7.4

#### RBC

6-8  $10^6/mm^3$

#### Hematocrit

39-46 gm/100ml

#### Platelets

250-500  $10^3/mm^3$

#### Hb

11.5-15.5 gm/100ml

### Total and Differential White Blood Cell Counts

#### Leucocytes

14-18  $10^3/mm^3$

#### Neutros

22-40 %

#### Eosinos

0-6 %

#### Basos

0-2 %

#### Lymphos

50-70 %

#### Monos

0-5 %

## Life Cycle Information

#### Adult Weight Male/Female

70 kg/70kg

#### Weight at Birth

700 gm

#### Breeding Age Male

6-7 months

#### Breeding Age Female

6-7 months

#### Estrus Cycle

21 (18-24) days

#### Heat Period

2-3 days

Mini-Pig  
Crossbred

#### Gestation

114 days

#### Weaning Age

56 days

#### Offspring

4-8

#### Rebreed After Weaning

First or subsequent estrus cycle

#### Breeding Life Male/Female

Productive breeding life is about 3 years. Crossbred strains will breed longer

Mini-Pig  
Crossbred

#### Mating Data:

1/20 depending upon breeding management program

\* Refer to the "Guide for the Care and Use of Laboratory Animals" — NIH Publication No. 85-23, Revised 1985 Prepared by the Institute of Laboratory Animal Resources, National Research Council, 2101 Constitution Avenue, N.W., Washington, DC 20418

\*\* Biological Values are variable with no definitive data to declare differences among swine breeds. These values are presented as guidelines and subject to revision as information accumulates.

Reference sources: *Diseases of Swine*, A. D. Leman, et al., Iowa State University Press (1986). *Miniature Swine*, Charles River Digest 22, #3 (1983). D. E. Reese, et al., *Am. Vet. Res.* 45, 978 (1984). *Blood and other Body Fluids*, FASEB, 9650 Rockville Pike, Bethesda, MD 20814.