

Environmental Guidelines for Confinement Swine Housing



Humidity

Maintain relative humidities in the range of 50 to 60 percent. This range reduces disease potential because:

- bacteria is not prolific at relative humidities of 30 to 60 percent,
- viruses are not prolific from 50 to 70 percent,
- fungi grow well at humidities above 60 percent, and
- respiratory infections tend to grow slower at 50 percent.

Drafts

Drafts of 30 feet per minute or greater may cause stress on small pigs. Drafts of 60 feet per minute or less are not harmful to large pigs during winter. In summer, drafts will be beneficial to large hogs due to increased cooling potential.

Temperature

The table below suggests optimal temperature ranges for pigs. Young pigs may be provided with zone heating to maintain temperature without heating the entire room. Measure temperatures at pig levels.

Pig Age Weeks	Approximate Pig Weight lbs.	Low Temperature degrees F	High Temperature degrees F
At birth		90	95
3	12	86	88
4	16	84	88
5	20	83	86
6	24	80	86
7	30	78	84
8	38	76	84
9	46	73	82
10	56	70	82
11	68	68	80
12	80	66	80
13	92	64	80
14	104	62	80
15	116	60	80
16	128	58	80
17	141	56	80
18	155	56	80
19	171	56	80
20	187	54	80
22	215	54	80
24	240	52	80
26	260	52	80
Sow, lactating		60	75
Sow, gestating		55	80
Boar		55	75

IOWA STATE UNIVERSITY
University Extension

File: Engineering 1-1

Prepared by Jay D. Harmon and Hongwei Xin, assistant professors and extension agricultural and biosystems engineers, Department of Agricultural and Biosystems Engineering.

 **Equity and justice for all**

The Iowa Cooperative Extension Service's programs and policies are consistent with pertinent federal and state laws and regulations on nondiscrimination regarding race, color, national origin, religion, sex, age, and disability.

Cooperative Extension Service, Iowa State University of Science and Technology and the United States Department of Agriculture cooperating. Robert M. Anderson, Jr., director, Ames, Iowa. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.