

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

South Dakota Poultry Field Day Proceedings and
Research Reports, 1970

Animal Science Reports

1970

A Comparison of Slat Floors, Litter Floors and Cages for Laying Hens

P. E. Plumart
South Dakota State University

R. D. Muller

C. W. Carlson

Follow this and additional works at: http://openprairie.sdstate.edu/sd_poultry_1970

Recommended Citation

Plumart, P. E.; Muller, R. D.; and Carlson, C. W., "A Comparison of Slat Floors, Litter Floors and Cages for Laying Hens" (1970). *South Dakota Poultry Field Day Proceedings and Research Reports, 1970*. Paper 2.
http://openprairie.sdstate.edu/sd_poultry_1970/2

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Poultry Field Day Proceedings and Research Reports, 1970 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

A COMPARISON OF SLAT FLOORS, LITTER FLOORS AND
CAGES FOR LAYING HENS

P. E. Plumart¹, R. D. Muller² and C. W. Carlson³

Commercial hybrid pullets were distributed in 3 different buildings at 20 weeks of age and fed similar diets. Twelve slat floor pens in a building referred to as the environment house and 2 litter floor pens in a building referred to as the brooder house each received 140 pullets (1 bird/sq. ft.). Six pullets were placed in each of 32 cages in a cage layer house.

From 23-26 and 27-30 weeks of age, the following percent hen-day egg production was attained: environment house (slat floors), 45.12, 56.95; brooder house, 60.53, 75.71; and cage house, 47.83, 73.42.

From 35-38 and 39-42 weeks of age, the following production was attained: environment house (slat floors), 51.36, 48.44; environment house (litter floors), 65.00, 63.45; brooder house, 78.26, 74.36; and cage house, 69.94, 71.76. The difference between production on litter and slat floors (15%) was found to be very highly significant. Since the diets used gave satisfactory production for the caged layers, the differences between slat and litter floors were not caused by inadequate nutrition. Because of these differences, the slat floors were removed from 6 of the 12 pens in the environment house.

¹Assistant Professor and Extension Poultryman

²Former Graduate Assistant

³Professor and Leader, Poultry Research and Extension

In the environment house one chamber of 4 pens was maintained by a furnace-air conditioner at 60° F., while two other chambers were thermostatically controlled at 45 and 55 degrees F. by ventilation fans. It may be noted in Table 1 that lower egg production occurred in the coldest chamber.

TABLE 1. HEN-DAY EGG PRODUCTION

<u>Experiment 2A.</u>			<u>Experiment 2B.</u>		
	<u>AGE (wks.)</u>			<u>AGE (wks.)</u>	
	23-26	27-30		35-38	39-42
	<u>ENVIRONMENT HOUSE</u>			<u>ENVIRONMENT HOUSE</u>	
	%	%		%	%
60° F.	46.76	59.81	60° F.	59.75	57.86
55° F.	44.66	57.38	55° F.	61.27	58.05
45° F.	43.94	53.67	45° F.	53.53	51.92
			Slat Floor	51.36	48.44
			Litter Floor	65.00	63.45
Mean	45.12	56.95	Mean	58.18	55.94
	<u>BROODER HOUSE</u>			<u>BROODER HOUSE</u>	
Mean	60.53	75.71	Mean	78.26	74.36
	<u>CAGE HOUSE</u>			<u>CAGE HOUSE</u>	
Mean	47.83	73.42	Mean	69.94	71.76