CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)
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Project Number
J0317

Project Title
Effects of Age and Sex on the Aggressive Behavior of Chickens

Abstract

Objectives/Goals
The objective is to determine if age and/or sex has an effect on aggressive behavior in chickens when a stress is introduced.

Methods/Materials
Fifty 2-month chicks of unknown sex were placed at one end of a 3'x 9' pen with a container of feed at the opposite end. A strong stream of air was blown across the center of the pen at breast level to provide a physical/psychological stress point for the bird to cross to reach the feed. This procedure was repeated for birds aged 6 and 12 months. These 2 age groups had 25 roosters and 25 hens. All birds were tested and timed twice to determine if and how long it took to cross the barrier to reach food.

Results
Eighty-nine percent of the 2-month females crossed the barrier with an average time of 18 seconds. Only 7 of the 2-month chicks were determined to be male. Seventy-one percent crossed the barrier with an average time of 8 seconds. Eighty-four percent of the 6-month hens crossed the barrier with an average time of 27 seconds. Seventy percent of the 6-month roosters crossed the barrier with an average time of 50 seconds. Ninety-six percent of the 12 month hens crossed with an average time of 22 seconds. Eighty-four percent of the 12-month roosters crossed with an average time of 58 seconds.

Conclusions/Discussion
Hens were least affected by the stress of the air barrier, more aggressive, and had a higher percentage of crossing the barrier to reach food in all 3 age groups. It appears that sex does affect aggression in chickens. The data was inconclusive for age having an effect on aggressive behavior although the 2-month olds were more aggressive in both sexes. Knowing that females are more aggressive than males may be important for breeding purposes. Females are more focused on obtaining food, probably due to being egg layers. This is a desirable trait to continue the breed. The data suggests that six months is a good age to introduce birds to each other in a flock. There may be less problems with pecking order confrontations.

Summary Statement
My project determined whether age and sex had an effect on aggressive behavior in chickens.

Help Received
Mr. Carl Gong helped with data tables and graphs. My parents, brother and sister helped catch chickens and cut out letters for display.