

Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

Aflatoxins, toxic metabolites of the mold fungi *Aspergillus flavus* or *Aspergillus parasiticus*, cause poor feed utilization, decreased weight gains, depressed immune function, liver dysfunction, coagulation abnormalities, and death in a wide variety of species including humans.

Conservationists have become concerned that increasingly popular wildlife feeding or baiting practices could expose wildlife to toxic amounts of aflatoxin-contaminated grains, particularly corn. The effects of aflatoxins on the wild turkey (*Meleagris gallopova silvestris*) are of special concern because the conspecific domestic turkey is highly susceptible to aflatoxins.

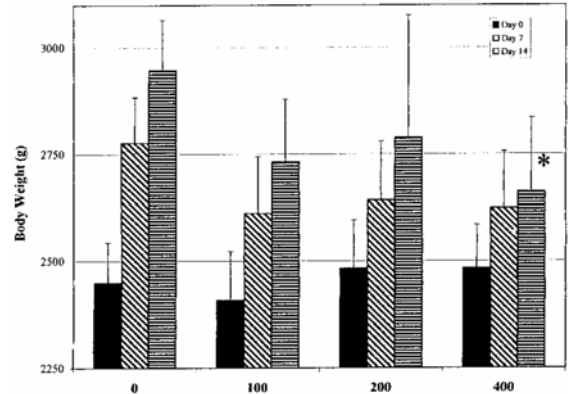


FIGURE 1. Average body weights ( $\pm$ SD) of groups of 4-mo-old wild turkey poult groups fed 0, 100, 200, or 400  $\mu$ g aflatoxin/kg feed at 0, 7, and 14 days.

To evaluate the effect of dietary aflatoxin on wild turkey poult\*, four groups of 4-mo-old poult were fed diets containing 0, 100, 200, or 400  $\mu$ g aflatoxin/kg feed for 2 wk in September and October 1996. Feeding trials were conducted at the University of Georgia Poultry Diagnostic and Research Center. When the birds were 3.5-mo-old, the poult were divided into four groups of 12 and assigned to one of 4 pens. Each pen was assigned one of four dietary treatments of 0 (control), 100, 200, and 400  $\mu$ g total aflatoxin/kg feed. Poult were banded for individual identification and baseline body weight was taken at the beginning of the study, on day 0. Turkey poult were weighed again at 7 and 14 days into the study. The variable of interest is body weight. \* a poult is a turkey hatchling, a very young turkey

Answer choices:	(A) poult	(B) aflatoxin diets	(C) body weight
	(D) pen	(E) days	(F) humans

Name \_\_\_\_\_ Quiz Number \_\_\_\_ Date \_\_\_\_ / \_\_\_\_ / 2012

Circle the appropriate letter for each question.

- 1) What is the experimental unit for this experiment? A B C D E F
- 2) What is the sampling unit for this experiment? A B C D E F
- 3) What is the dependent variable for this experiment? A B C D E F
- 4) What is the treatment variable for this experiment? A B C D E F
- 5) If the design is RBD, what are the blocks? A B C D E F NA
- 6) Does it seem more likely that the treatments are fixed or random? (A) fixed (B) random
- 7) What is the treatment arrangement for this experiment? (A) single factor (B) factorial (C) nested
- 8) What is the experimental design? (A) CRD (B) RBD (C) LSD (D) Split-plot (E) Repeated Measures
- 9) The treatment degrees of freedom are \_\_\_\_\_.
- 10) The degrees of freedom for the error used for testing treatments are \_\_\_\_\_.