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

In a aquaculture investigation (Clarias and Tilapia Interaction in Polyculture. C. Kwei Lin Agricultural and Food Engineering Division, Asian Institute of Technology, G.P.O. Box 2754, Bangkok, Thailand) the effect of mixed sex pond culture of tilapia and catfish culture was examined. The treatments were described in the authors Table 1 (modified below).

Table 1. Stocking treatments of mixed-sex Nile tilapia and African catfish.
    Treatment 1 (T1): ponds stocked with 200 male tilapia only
    Treatment 2 (T2): ponds stocked with mixed sex tilapia (200 each sex)
    Treatment 3 (T3): ponds stocked with mixed sex tilapia and catfish (200 each sex + 200 catfish)

Three 200 m^2 earthen ponds were allocated to each treatment (9 total), and fish were stocked. One hundred twelve days later the fish were harvested from each pond and the net yield of fish calculated for each pond (see graphic).

Net fish yield (kg/pond/112 days)

40
30
20
10
0

M   M + F   M + F+ C
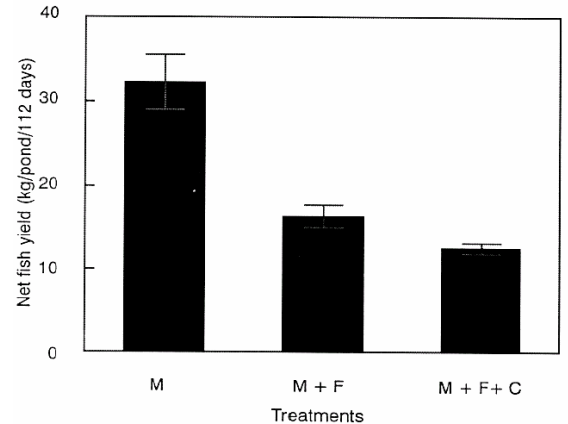
Treatments

Questions:

What is the treatment arrangement for this experiment?

    (a) single factor   (b) factorial   (c) nested

What is the experimental design for this experiment?

    (a) CRD   (b) RBD   (c) LSD   (e) Split-plot   (d) Repeated Measures

Does it seem to you that the treatments are fixed or random?

    (a) fixed   (b) random

What is the experimental unit for this experiment?

    (a) fish   (b) ponds   (c) fish sex   (d) days   (e) stocking rate

What is the sampling unit for this experiment?

    (a) fish   (b) ponds   (c) fish sex   (d) days   (e) stocking rate

What is the dependent variable for this experiment?

    (a) fish   (b) ponds   (c) fish sex   (d) days   (e) stocking rate

If the design is RBD, what are the blocks?

    (a) fish   (b) ponds   (c) fish sex   (d) days   (e) stocking rate

How many degrees of freedom are available for testing the treatments?

        Enter the correct value here: _____