

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

An Agricultural researcher is interested in the effect of competition for light by Sugar Beet plants. Sugar beets average about 22 inches high, and many weeds that infest the sugar beet fields surpass this height. Wild mustard, for example, averages about 26 inches.

The researcher establishes a single sugar beet field with 60 rows, each 10 m long with suitable buffer zones. Each row is seeded with sugar beets at the usual commercial rate and with wild mustard plants at one of 6 six densities (10 rows were randomly allocated to each mustard infestation rate). The rates of mustard infestation were 0, 2, 4, 8, 16 and 32 plants per row). The variable of interest is the sugar beet harvest biomass recorded for each row.



Answer choices:	(A) a sugar beet plant	(B) mustard plant density	(C) a row
	(D) harvest biomass	(E) 22 inch height	(F) buffer zone

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 _____ .