

**EXST7015 : Daily Design Question 16**

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

**Variety trials are a common aspect of modern agriculture. These trials are used to test different varieties of a crop such as corn or rice and select the best varieties. Typically many different varieties are employed. For example, in the 1999 Michigan Corn Performance Trials there were 281 hybrids from 32 seed companies entered in 1297 county tests.**

**In soybean trials conducted by the University of Illinois in 2001 there were 164 conventional varieties grown in 12 sites around the state. Each variety was replicated in 3 plots at each site. The yield from each plot was expressed in bushels per acre at a moisture content of 13 percent. The objective of the test was to perform pairwise tests of the differences among varieties.**

**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) variety (b) plot (c) site (d) plot (e) acre (f) bushel

**What is the sampling unit for this experiment?**

- (a) variety (b) plot (c) site (d) plot (e) acre (f) bushel

**What is the dependent variable for this experiment?**

- (a) variety (b) plot (c) site (d) plot (e) acre (f) bushel

**If the design is RBD, what are the blocks?**

- (a) variety (b) plot (c) site (d) plot (e) acre (f) bushel

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

**Enter the correct value here: \_\_\_\_\_**