

Question for March 23, 2004 Quiz 16 PDF

16) An entomologist wants to determine if leafrollers (an insect) would find apple, pear, cherry and alfalfa to be suitable host plants. Apple, pear and cherry are not the usual hosts plants for leafrollers, but leafrollers are occasionally found on these plants. In addition to examining various hosts for suitability the investigator wants to determine if the level of suitability is the same for both male and female leafrollers. Measures of suitability as included the mean develop time for larva and mean development time for pupa (see table). These are two separate variables of interest for analysis.

Table 1.1. Development of *X. pallorana* reared on different hosts in Petri dishes.

| Host | Sex | n | Larval developmental time (days) | Pupal developmental time (days) |
|----------------|--------|----|----------------------------------|---------------------------------|
| <i>Cherry</i> | Male | 13 | 35.6a | 11.9a |
| <i>Pear</i> | Male | 21 | 32.0b | 11.8a |
| <i>Apple</i> | Male | 11 | 34.4ab | 11.9a |
| <i>Alfalfa</i> | Male | 14 | 25.8c | 11.9a |
| <i>Cherry</i> | Female | 13 | 40.8a | 11.1a |
| <i>Pear</i> | Female | 8 | 36.5b | 10.9a |
| <i>Apple</i> | Female | 19 | 35.8bc | 10.8a |
| <i>Alfalfa</i> | Female | 9 | 33.1bc | 10.2a |

Means within a column followed by the same letter are not significantly different ($P > 0.05$) Fisher's protected LSD test.