

**...Before you begin to collect...have you soaked up the essentials from the CBG seed collecting protocol...test yourself...**

Millennium Seed Bank Project Open notes Quiz- SurveyMonkey

1. The best way to determine filled seeds from unfilled seeds
  - a. Weigh the seeds individually in your hand; the heavier ones are good
  - b. Look at their appearance, unfilled seeds just look funny
  - c. Cut them open and look for a creamy baby
  
2. Seeds with fleshy fruits need to be either cleaned or sent to CBG by
  - a. one week after harvesting
  - b. two weeks after harvesting
  - c. within three days after harvesting
  - d. one month after harvesting
  
3. There are 500 individuals of species B, half on the east side of a river, the other half on the west-side, but it is obvious that they are the same population. Each individual has an average of 10 fruits and each fruit has 10 seeds. To best maximize genetic diversity, the best sampling regime is
  - a. Don't make a collection, not enough seeds
  - b. Stratify random
  - c. Pick the first 100 individuals clean
  
4. What materials must you bring to the field
  - a. Small pocket knife to do cut tests with
  - b. Data sheet
  - c. GPS
  - d. All the above
  
5. Non-fleshy fruited collections need to be sent to the Chicago Botanic Garden
  - a. Within a week after being collected
  - b. The day after being collected
  - c. Two weeks after harvesting
  - d. One month after harvesting
  
6. Between harvesting and shipping a good place to store seeds
  - a. In your refrigerator
  - b. Outside, right where the sprinklers pool water and the the sun hits the seeds all day.
  - c. On a shelf in your air-conditioned house
  - d. In the garage of your air-conditioned house

7. The best way to press a plant
  - a. Write date, scientific name, collector name and collection date on the inside of newspaper
  - b. Write nothing on newspaper, it is more fun to have them guess
  - c. Shape the plant so that it fits on standard herbarium paper  $11 \frac{1}{2}'' \times 16 \frac{1}{2}''$ .
  - d. Press the plant in a way that it is impossible to see the flowers and also leaves no space for an herbarium label
  
8. The population has 50 individuals and each individual plant has 1000 seeds. To sample
  - a. Don't harvest, not enough individuals
  - b. Sample 200 seeds from each plant
  - c. Take 500 seeds from the first 20 plants
  - d. Don't harvest, not enough seeds

## Answers

9. The best way to determine filled seeds from unfilled seeds
  - a. Weigh the seeds individually in your hand; the heavier ones are good
  - b. Look at their appearance, unfilled seeds just look funny
  - c. Cut them open and look for a creamy baby- cut test, cut test, cut test
  
10. Seeds with fleshy fruits need to be either cleaned or sent to CBG by
  - a. one week after harvesting
  - b. two weeks after harvesting
  - c. within three days after harvesting-when seeds are wet, they age. We want our seeds to live as long as possible while in cold storage
  - d. one month after harvesting
  
11. There are 500 individuals of species B, half on the east side of a river, the other half on the west-side, but it is obvious that they are the same population. Each individual has an average of 10 fruits and each fruit has 10 seeds. To best maximize genetic diversity, the best sampling regime is
  - a. Don't make a collection, not enough seeds
  - b. Stratify random-humans are biased and lazy-make yourself sample randomly within a population
  - c. Pick the first 100 individuals clean
  
12. What materials must you bring to the field
  - a. Small pocket knife to do cut tests with
  - b. Data sheet
  - c. GPS
  - d. All the above-don't fill the data sheet out later, you always miss stuff (I know from experience). Cut test, cut test, cut test
  
13. Non-fleshy fruited collections need to be sent to the Chicago Botanic Garden
  - a. Within a week after being collected-the sooner the better. I'd do it no later than 5 days after collecting
  - b. The day after being collected
  - c. Two weeks after harvesting
  - d. One month after harvesting
  
14. Between harvesting and shipping a good place to store seeds
  - a. In your refrigerator
  - b. Outside, right where the sprinklers pool water and the the sun hits the seeds all day.
  - c. On a shelf in your air-conditioned house-keep these babies in the lowest relative humidity situation possible. Remember, humidity and relative humidity are different
  - d. In the garage of your air-conditioned house

15. The best way to press a plant
- Write date, scientific name, collector name and collection date on the inside of newspaper
  - Write nothing on newspaper, it is more fun to have them guess
  - Shape the plant so that it fits on standard herbarium paper  $11 \frac{1}{2}'' \times 16 \frac{1}{2}''$ . Think about it from the mounter's perspective.
  - Press the plant in a way that it is impossible to see the flowers and also leaves no space for an herbarium label
16. The population has 50 individuals and each individual plant has 1000 seeds. To sample
- Don't harvest, not enough individuals
  - Sample 200 seeds from each plant –you can take 20% and obviously, if you sample all 50 plants you have captured the genetic diversity within that population
  - Take 500 seeds from the first 20 plants
  - Don't harvest, not enough seeds