

## Review Questions

### Dr. Williamson: Grafting and Budding

1. What is a kind of asexual means of propagation other than grafting or budding?

*Rooting cuttings*

2. Why are grafting and budding important to the production of good fruit trees?

*Grafting onto a rootstock can provide the tree with beneficial characteristics of the rootstock that the scion may not possess.*

3. Name some specific beneficial characteristics of many fruit rootstocks.

*Increased cold hardiness, tolerance to adverse soil conditions such as drought, pests, and pathogens, control of tree size, and increased fruit yield and quality.*

4. When would inarching be used?

*Inarching is used to repair damage on a tree's lower trunk or weak root system.*

5. When is the best time to collect budwood?

*Early in the morning while the plant water potential is still high.*

6. What are the characteristics of a good piece of budwood when doing T-budding or hanging chip buds?

*Buds should be 2-3 nodes back from the terminal bud. Angular growth with ridges on the surface of the bud is indicative of young, tender flush that is not mature enough. Barky striations on the surface show that the piece is too old to be ideal for budding.*

7. What are some indications that a successful bud union did not form?

*Shriveled, wrinkled, and dried out bud, no callus tissue on edges of cut, necrotic (brown) tissue on edges of cut or bud.*

8. What is bud forcing and why is it used?

*Bud forcing is encouraging the growth of the scion (grafted) bud preferentially over the growth of the rootstock bud. Otherwise, the rootstock will continue growing and the scion would not become dominant. It is initiated by removing the apical bud of the rootstock.*

9. What is the difference between lopping and bending?

*In lopping, a cut is made above the scion and the rootstock is bent (broken) at the cut. In bending, no cut is made so that the top can provide nutrients and photosynthates for the growing bud.*

10. How should you prepare your tools and the plants for grafting?

*The rootstock should be thoroughly irrigated the day before, your knife should be clean and sharp, the plants should be in the correct growth stage and unstressed.*