

## Maple Syrup/Sap Quiz

### Fill-in-the-Blank:

1. What is the approximate concentration of sugar in maple sap? \_\_\_\_\_
2. What is the predominant sugar in maple sap? \_\_\_\_\_
3. Identify at least three other organic compounds found in maple sap  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
4. Approximately how much sap do you expect to come from a single tap hole?  
\_\_\_\_\_
5. Approximately how much syrup will each tap produce? \_\_\_\_\_
6. What is the standard drill bit size for tapping maple trees? \_\_\_\_\_
7. What is the scientific name of sugar maple? \_\_\_\_\_
8. When did the monks at St. John's begin making maple syrup? \_\_\_\_\_

### True or False:

1. T F Maple sap flow is due to root pressure
2. T F Maple sap comes out of phloem
3. T F Maple sap is rich in glucose
4. T F Maple syrup is the oldest north American crop
5. T F Maple sap was made in Europe before the settlers arrived in America
6. T F Sap flow occurs mostly at night
7. T F Hickory syrup is made the same way as maple syrup

### Short Answer Questions

1. There is a trend toward drilling smaller diameter holes in trees. What are the advantages and disadvantages of this practice?
2. What is an oligosaccharide? Give an example.
3. What is sugar sand? What is it chemically made of?
4. What is the difference between a "soft" and a "hard" maple? Can you tap both types of maples to make syrup? Which is preferred and why?

5. Name three other trees that can be tapped like sugar maple to produce sap?

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6. How does a “syrup maker” know when the sap has sufficiently been cooked to make syrup?

7. What is the Rule of 86?

8. Why can't you tap a maple tree in the middle of the summer to obtain sap?

9. Why are maple trees normally tapped from mid-Mar to mid-April in central Minnesota?

10. If maple sap has a concentration of 4%. How many gallons of water would you have to boil off to make one gallon of syrup? Show your work.