How QUICK Are You?

Alberta Farm Safety Program

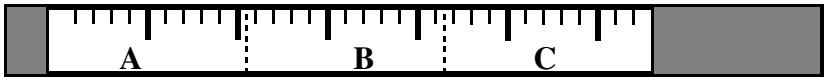
How quick are you? Are you ready for the 'Quick Stick' challenge? Machinery and tools are used everyday on the farm to make work easier, but they can also be very dangerous. The "Quick Stick" activity is an easy way to test your reaction time to see if you are fast enough to get out of the way of moving farm equipment.

Activity: Build your very own **Quick Stick**.

Materials needed: a meter stick or something similar such as doweling, time scale (included), scissors and tape.

Directions:

1. Cut out the time scale sections A, B and C (page 3)
2. Tape section A about 1.5 cm (0.5 inch) from the end of the meter stick
3. Tape section B on top of segment A
4. Tape section C on top of segment B (see illustration below)



Test your reaction time!

1. Ask a partner to hold your Quick Stick above the floor with the "start' end down. **See photo A.**
2. Hold your hand about 5 cm apart just below the word 'Start' of your Quick Stick. **See photo B.**
3. When your partner drops the Quick Stick, try to catch it as soon as you can. **See photo C.**
4. When you catch the stick note the number that is **just above** your thumb. This is the number of seconds it took to react. **See photo D.**
5. Try this again but this time have your partner distract you.
6. Compare your reaction time to the 'How Fast Is Your Equipment' chart (page 3) to see if it is quick enough to avoid injury by various pieces of farm machinery.
7. Review the safety rules for equipment on your farm.

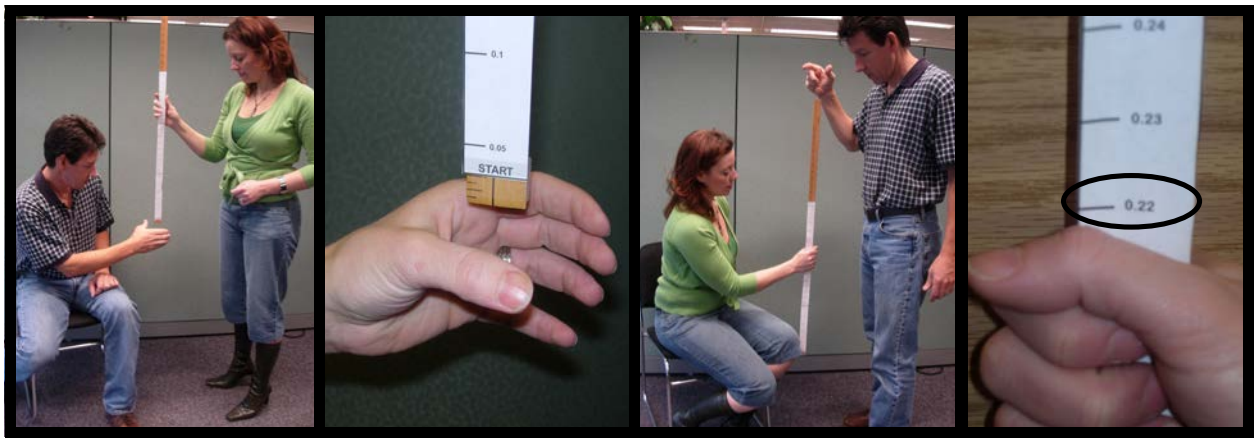


Photo A: Have your partner hold the quick stick with the start end down.

Photo B: Hold your hand open just below the start line.

Photo C: Catch the stick as soon as your partner lets it go. Switch places with your partner.

Photo D: The number above your thumb is your reaction time.

Record your time!

Name: _____	**Name:** _____	**Name:** _____
1. _____	**1.** _____	**1.** _____
2. _____	**2.** _____	**2.** _____
3. _____	**3.** _____	**3.** _____
4. _____	**4.** _____	**4.** _____
5. _____	**5.** _____	**5.** _____
6. _____	**6.** _____	**6.** _____
7. _____	**7.** _____	**7.** _____
8. _____	**8.** _____	**8.** _____
9. _____	**9.** _____	**9.** _____
10. _____	**10.** _____	**10.** _____

Questions...

1. Is there a time difference between your right and left hand? Why?
2. Did it take longer to catch the stick when you were distracted? Why might this be? Which situation would most likely occur out in the farm yard?
3. Was there a time difference between the males and females in the house?
4. Was there a time difference between younger and older people? Why?
5. How did your reaction time compare to the machinery times listed?
6. Do you think it is possible to be faster than a machine?
7. **What have you learned from this activity?** _____

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How Fast Is Your Equipment?

Lawn Mower

52 cuts per second

- 5 cuts in 0.1 second
- 10 cuts in 0.2 second
- 15 cuts in 0.3 second
- 20 cuts in 0.4 second
- 26 cuts in 0.5 second

Belt and Pulley:

Travels at 20 meters (66 feet) per second

- 2.1 meters (7 feet) in 0.1 second
- 4.0 meters (13 feet) in 0.2 second
- 5.8 meters (19 feet) in 0.3 second
- 7.9 meters (26 feet) in 0.4 second
- 10.0 meters (33 feet) in 0.5 second

PTO Shaft

At 1000 RPM, pulls in 4 meters (13 feet) per second

- 0.4 meters (1.3 feet) in 0.1 second
- 0.8 meters (2.6 feet) in 0.2 second
- 1.2 meters (3.9 feet) in 0.3 second
- 1.6 meters (5.2 feet) in 0.4 second
- 2.0 meters (6.5 feet) in 0.5 second

Auger Entanglement

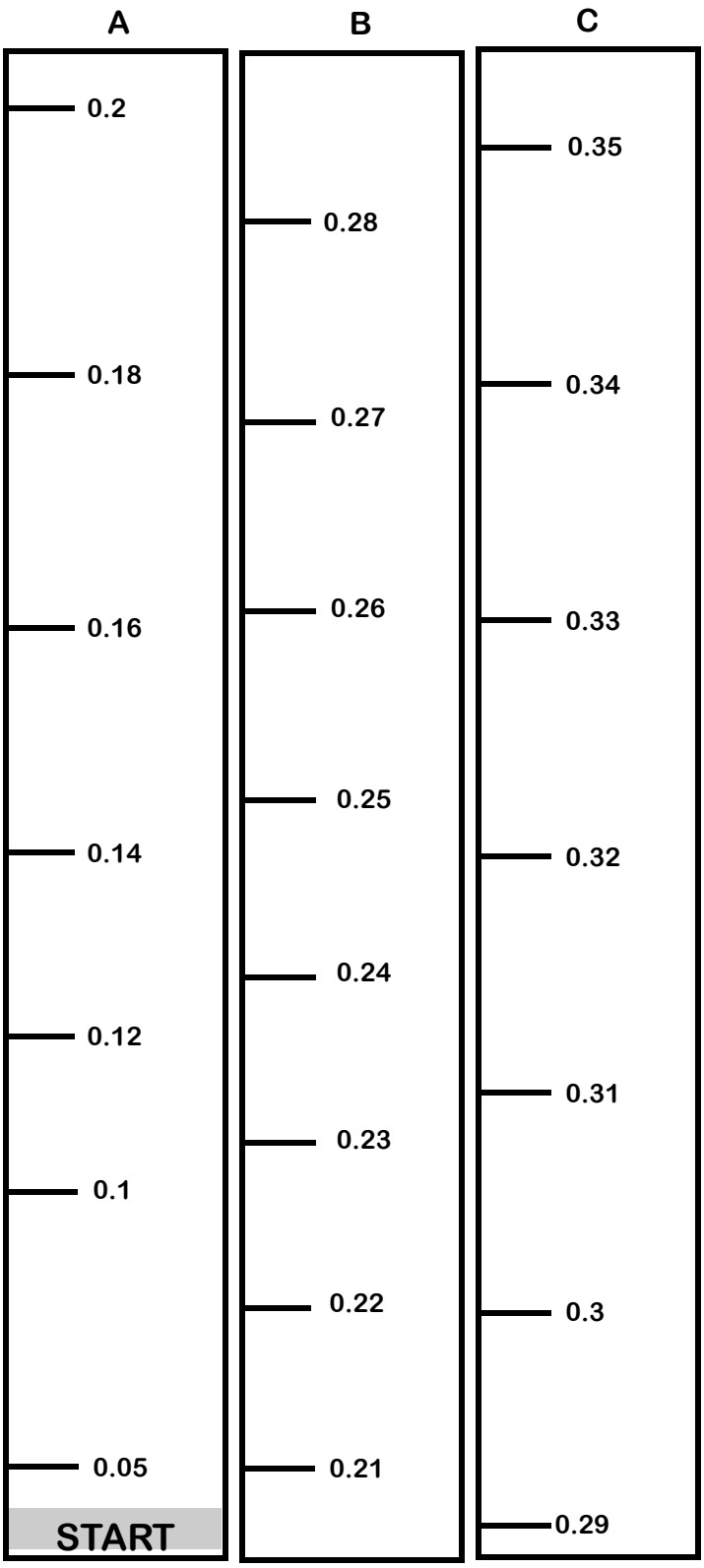
A 6-inch auger at 400 RPM entangles at 3 meters (10 feet) per second

- 0.3 meters (1 foot) in 0.1 second
- 0.6 meters (2 feet) in 0.2 second
- 0.9 meters (3 feet) in 0.3 second
- 1.2 meters (4 feet) in 0.4 second
- 1.5 meters (5 feet) in 0.5 second

Distance Equipment Falls During Reaction Time:

An object falls at a rate of 15.8 meters (32 feet) per second

- 0.1 meters (0.2 feet) in 0.1 second
- 0.2 meters (0.6 feet) in 0.2 second
- 0.4 meters (1.4 feet) in 0.3 second
- 0.8 meters (2.5 feet) in 0.4 second
- 1.2 meters (4.0 feet) in 0.5 second



Example: if your reaction time is 0.2 seconds, a PTO shaft will have pulled you in 0.8 of a meter by the time you react!