

Students please affix one of the self adhesive labels from your sheet of identification labels to this page. Make sure the edges of the label are within the boundaries of this box and that the affixed label does not obscure any other parts of this page. If you do not have a self adhesive identification label, please complete the following information.

Your Name: _____
Write your name as it appears on your name badge.

Your Participant Code:

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Write your participant code as it appears on your name badge.
Two letter state abbreviation. ↑
State code (0301, 0302, to 0350) ↑
Team member number (01, 02, 03, or 04) ↑

Students please do not write or mark within this box.

Judges, after this skill sheet has been scored and double checked, write the total score for this activity in the blank below.

Skill Activity Score: _____

Judge's Initials: _____

2014 National FFA Agricultural Technology & Mechanical Systems Career Development Event Machine and Equipment Systems Skill Sheet

There are multiple parts to this activity!

Please read and follow directions carefully! Use your time wisely!

GENERAL INFORMATION/DIRECTIONS:

For this skill activity, assume that you are the manager of a custom planting operation that plants corn and soybeans. The operation uses John Deere planters, like the model at your work station. The typical planting season runs from April 14 to May 15, with 10 days available for planting due to weather patterns. The overall operation runs three (3) 24-row, 30 inch planter units for corn (*like the planter model at your work station*), with each machine operating at 65% field-efficiency for a 12 hour day during the planting season. Each planter operates at 5.5 MPH. To maximize production and rate of return you will be planting approximately 36,000 seeds per acre of a seed corn variety that has uniform round seeds and 1,750 seeds per pound. Your custom operation has the ability to deliver seed and fertilizer in a timely manner, as needed by the planting crew.

One of your planters needs to be serviced before planting begins. You will need to adjust planting depth and check to make sure that the correct field corn seed disk is installed for optimum performance based on your seeding requirements and field conditions.

PROCEDURES:

1. Because you are working around machinery, safety glasses must be worn at all times.

(Station No. _____) Planter brand _____ Model number _____.

2. What is the minimum tractor hp recommended for this planter? _____ HP
3. Your planter is currently set for 1.5 inch planting depth, because of soil conditions you need to change the planting depth to 2.25 inch.. **(Make the change on your planter unit.)**
4. Based on the information provided above, what would the correct field corn seed disk number be for optimum performance?

5. Was the correct field corn seed disk installed in the planter? Yes ____ No ____
6. Based on the information provided above, what would be the **planting rate sprocket teeth number** for each of the following:
- Driver Sprocket _____ Driven Sprocket _____
7. What would the correct vacuum level be for the recommended seed disk? _____
8. Using the operator's manual and information provided, determine the following:
- A. Calculate the average number of acres planted per hour, at 65% field efficiency, per planter: (5,280 ft. = 1 mile and 43,560 ft² = 1 acre) _____ acres/hour
- B. How many acres can be planted by each operator per day? _____ acres
- C. How many total acres can your operation plant per season? _____ acres

Skill Activity Score Sheet		
Question Number	Possible	Score
1. Planter brand and model: (1)	2	_____
2. Correct recommended tractor horsepower (hp): (2)	3	_____
3. Was planting depth adjusted correctly? (3)	4	_____
4. Was the correct field corn seed disk selected? (4)	3	_____
5. Did they determine if the correct seed disk was installed: (5)	3	_____
6. Were the correct Driver and Driven sprocket teeth given (6)	2	_____
7. Was the correct vacuum level recorded: (7)	3	_____
8. Calculated acres planted per hour: (8.A)	4	_____
9. Calculated acres/operator/day: (8.B)	2	_____
10. Total acres planted per season: (8.C)	2	_____
11. Safety and work habits:	2	_____

TOTAL POINTS: (Double check point total and enter on front) 30		_____