Curriculum Development In Collaboration With The Agricultural Equipment Industry

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The Agricultural Systems Technology and Education Department collaborates with agricultural equipment companies to improve student educational experiences and provide professional development for faculty.

Many have representatives on the ASTE curriculum advisory board.
Location - Location - Location
Field Accessibility
5000’ Valley Elevation
Curriculum Challenges

- Technology is rapidly advancing:
  - Equipment technicians require annual training to remain current with new technology and provide service.
  - Acquiring newest agriculture technology is cost prohibitive for educational programs.
  - Dated curriculum / educational experiences not consistent with industry requirements.
Current Efforts

- Recent training has included:
  - Auto-Steer
  - Tier IV Engine Emission
  - Baler Double Knot Knotter
  - Air Seed Planters
Precision Agriculture Training

- Case - New Holland and Tremble Manufacturing
- GPS components and communication
- GPS and base station operation / software
- Installation, setup, and trouble-shooting
Auto-Steer Field Operation
Tier IV Engine Emissions

- Tier IV compliance regulation
- Setup, operation, and troubleshooting
- How SCR and CEGR works
- SCR, CEGR, and particulate filter components
- Diesel Exhaust Fluid (DEF) storage and handling

Selective Catalytic Reduction (SCR)
Cooled Exhaust Gas Recirculation (CEGR)
Tier IV Technology

PowerTech PWL Final Tier 4 technology

Engine Power and EPA Transition Timing Table:

<table>
<thead>
<tr>
<th>Engine Power</th>
<th>Tier 4 Interim</th>
<th>Tier 4 Final</th>
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<tbody>
<tr>
<td>kW</td>
<td>HP</td>
<td>2008</td>
</tr>
<tr>
<td>0-19</td>
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<td>15-37</td>
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<td>130-560</td>
<td>75-750</td>
<td>2011</td>
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<tr>
<td>560 &amp; Above</td>
<td>751 &amp; Above</td>
<td>2011</td>
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Double Knot Knotter

- Equipment operation and adjustment
- Troubleshooting knot failures

“The Double Knot Advantage”

Each knotter ties the final knot for the completed bale and during the same cycle, a new knot is tied for the next bale.
Double Knot Knotter

1. As bale is completed needle rotates up past the top of the bale.

2. As needle extends above the bale a knot is tied at the top of completed bale.

3. As needle retracts a knot is tied for the next bale.

4. When the next bale is complete the knotting process is repeated.
Program Goals

- Advance industry partnerships and educational opportunities for students and faculty.
- Regularly update curriculum and laboratory experiences to reflect current technology.
Thank You! Questions?