

Curriculum Development In Collaboration With The Agricultural Equipment Industry

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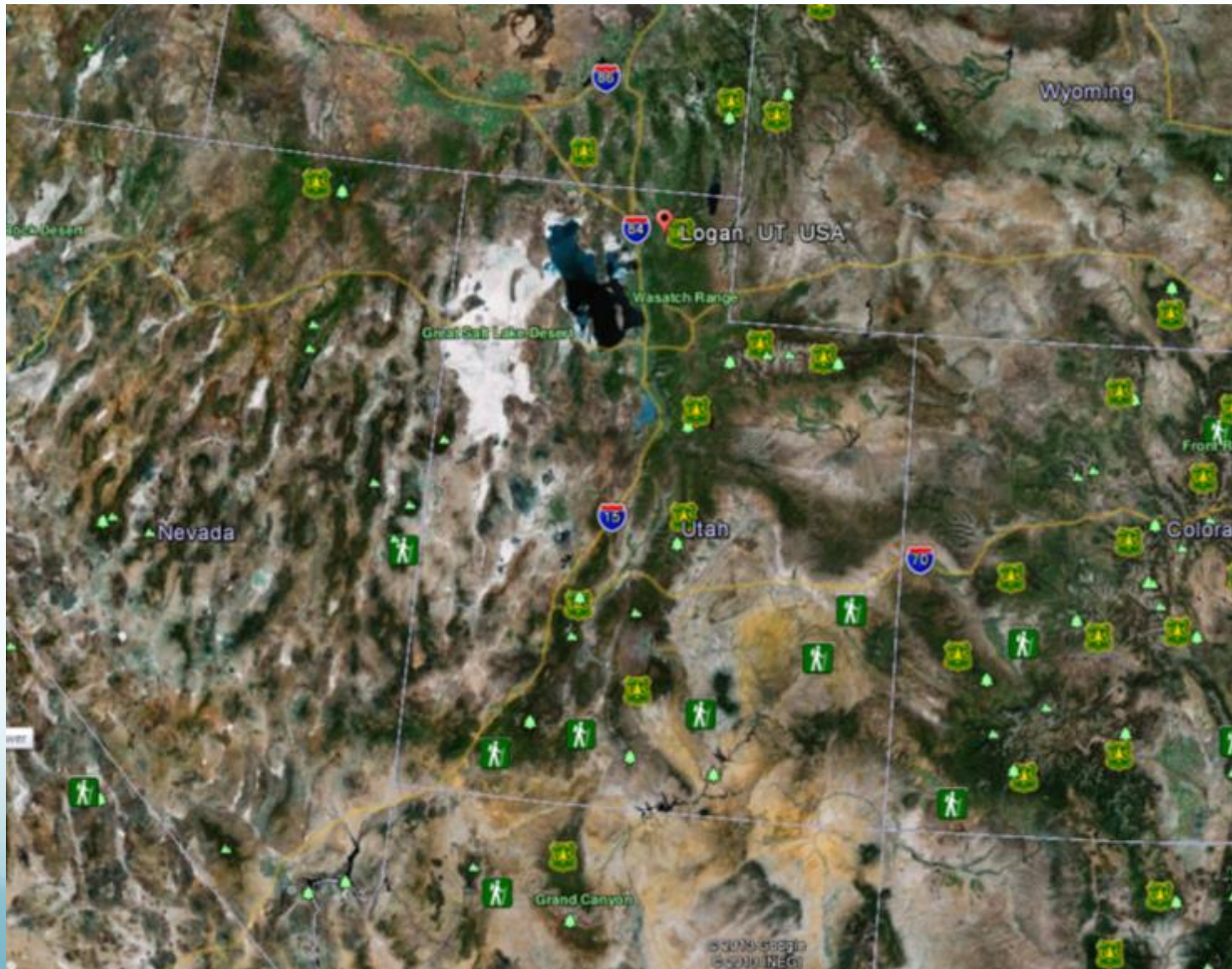
Project Description

- 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

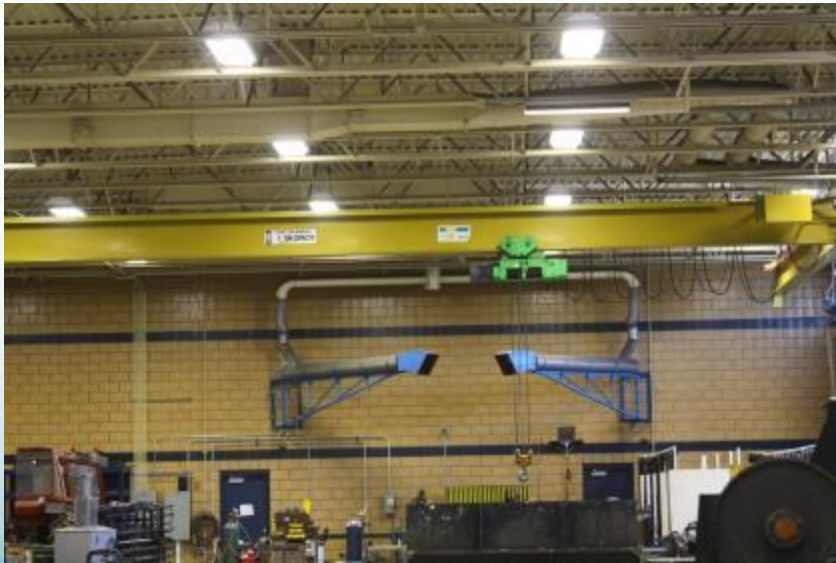


Field Accessibility



5000' Valley Elevation





Curriculum Challenges

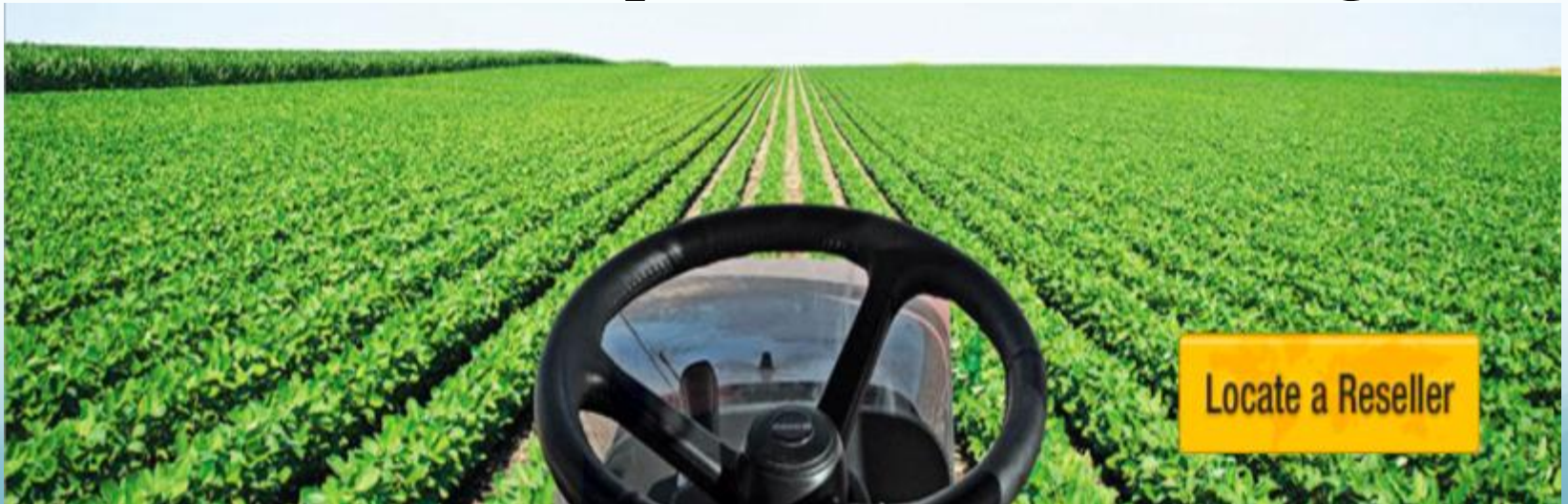
- **Technology is rapidly advancing:**
 - **Equipment technicians require annual training to remain current with new technology and provide service.**
 - **Acquiring newest agriculture technology is cost prohibitive for educational programs.**
 - **Dated curriculum / educational experiences not consistent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

Current Efforts

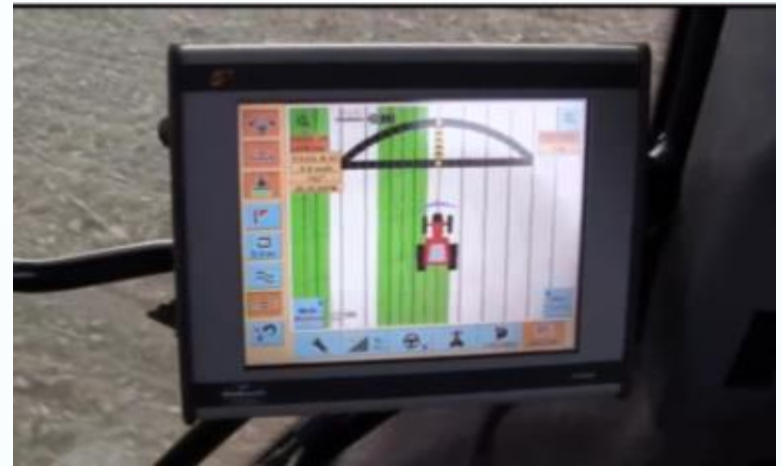
- **Recent training has included:**
 - **Auto-Steer**
 - **Tier IV Engine Emission**
 - **Baler Double Knot Knotter**
 - **Air Seed Planters**

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

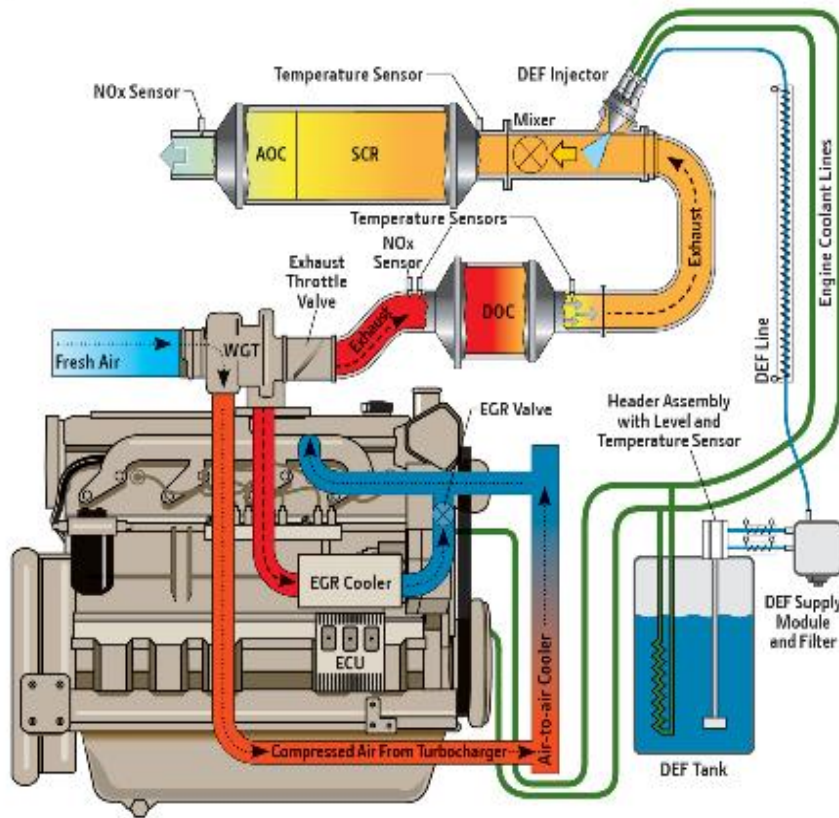
- **Tier IV compliance regulation**
- **Setup, operation, and troubleshooting**
- **How SCR and CEGR works**
- **SCR, CEGR, and particulate filter components**
- **Diesel Exhaust Fluid (DEF) storage and handling**

Selective Catalytic Reduction (SCR)

Cooled Exhaust Gas Recirculation (CEGR)

Tier IV Technology

PowerTech PWL Final Tier 4 technology



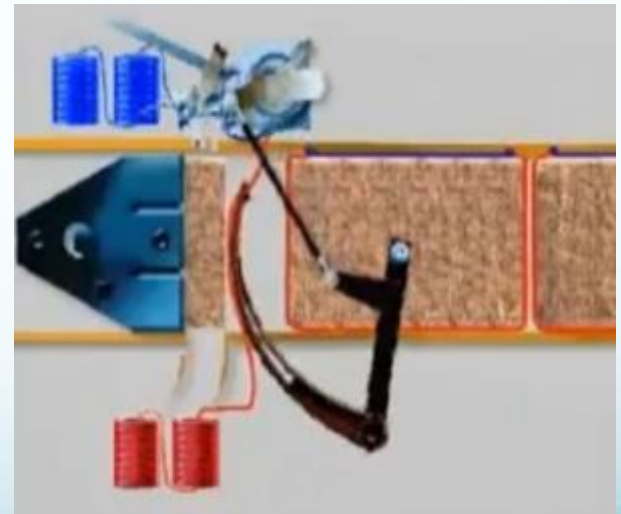
ENGINE POWER		EPA TRANSITION TIMING	
kW	HP	TIER 4 INTERIM	TIER 4 FINAL
0-19	0-25	*	2008
19-37	26-49	2008	2013
37-56	50-75	2008	2013
56-130	76-174	2012	2015
130-560	175-750	2011	2014
560 & ABOVE	751 & ABOVE	2011	2015

Double Knot Knotter

- **Equipment operation and adjustment**
- **Troubleshooting knot failures**

“The Double Knot Advantage”

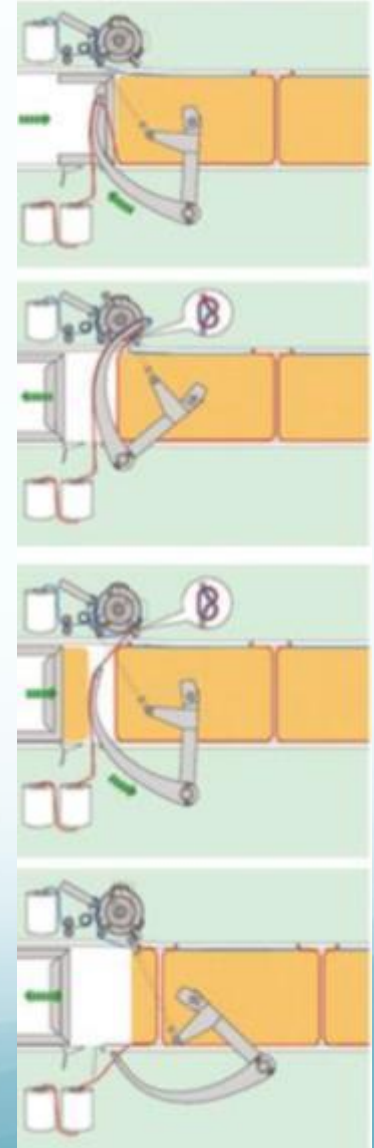
Each knotter ties the final knot for the completed bale and during the same cycle, a new knot is tied for the next bale.



Double Knot Knottter



- 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?

