Highway Safety with Farm Equipment

“Be Seen and Be Safe”

April 8, 2010
Norman Harrell, Extension Agent
The Need for Highway Safety...

- “Be Seen and Be Safe” program conducted in 2004
  - Tobacco Farmer Ted Keen was the catalyst for this program.
- High profile crashes in area
The Need for Action

- In seven-county area
  - Six in top 12 in farm vehicle crashes
  - 20.4% population increase in last decade
  - Farm operations increased in size by 18%
  - Larger operations mean greater travel distances with equipment

* UNC Highway Safety Center

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>CRASHES</th>
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<tbody>
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<td>Johnston</td>
<td>49</td>
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<tr>
<td>Pitt</td>
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<td>40</td>
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<td>Edgecombe</td>
<td>35</td>
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<td>Nash</td>
<td>33</td>
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<td>Wilson</td>
<td>29</td>
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<td>Greene</td>
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Project Funding

- North Carolina Tobacco Trust Fund Commission awarded a grant of $196,114.
Highways Safety Meeting

Goals

• Encourage farmers to be proactive regarding safe equipment operation on highways
• Farmers will understand current equipment marking standards
• Farmers will understand laws pertaining to farm machinery operation on highways
Types of Farm Vehicle Crashes

- Left Turn: 27%
- Rear End / Slowing Down: 24%
- Other: 13%
- Angle: 11%
- Sideswipe: 10%
- Not Stated: 7%
- Hit Parked Vehicle: 4%
- Backing: 4%
- Not Stated: 7%
- Hit Parked Vehicle: 4%
- Rear End / Slowing Down: 24%

* Data obtained from UNC Highway Safety Research Center
Left Turn Crashes
When Crashes Occur

• 38.3% of crashes occurred between 2 PM and 6 PM

• Highest number of crashes occurred in the month of May

• 79% occurred during daylight hours
Who Was At Fault

- Farm Vehicle Operator: 35%
- "Other" Vehicle Operator: 42%
- Neither Operator: 6%
- Both Operators: 17%
Major Types of Violations

- Improper Signal
- Failure to Yield
- Left of Center
- Improper Equipment
- Exceeding Speed Limit
- Exceeding Safe Speed
- Safe Movement Violation
- Improper Passing
- Failure to Reduce Speed

Farm Vehicle vs. Other Vehicle
What the Farmer Can Do

- Improve visibility
- Improve communications
- Know and follow the laws
Improve Visibility

• SMV emblem indicates machinery is traveling less than 25 mph
• Replace SMV emblems with ASAE S276.5 or ASAE S276.6
  – More fade resistant
  – Greatly improved reflectivity
  – Many local outlets stock older SMV emblems
• Located on rear, near the center, and 2 – 6 ft above the ground.
Left – new sign, old standard
Center – new sign, new standard
Right – old sign, old standard
Improve Visibility

Current Standard: ASAE S279.12
Improve Your Visibility

• Regularly check & repair lighting system
• Add high-visibility lighting
  – Strobe lights for tractors and other self-propelled machinery
  – Elevated tail lights for towing trailers
Farming is a hazardous occupation. This publication is designed to help you reduce highway hazards with farm equipment beyond the requirements of the law.

Drivers of non-farm vehicles need to see and quickly recognize farm equipment on the highway; thus, farm implements need to be seen for the operator to be safe.

Did you know:
- The most dangerous month for agricultural machinery on the highway is May

- The most dangerous time of the day is 2 pm to 6 pm (40% of crashes)

- Reports indicate that 50% of highway accidents with farm equipment result in an injury

The law requires:
- No person under the age of 15 can operate any farm tractor or motor-driven implement on the highway unless the driver is on the highway adjacent to land upon which the person lives when that person is actually engaged in a farming operation.
- Tractors operated on a highway at night must have one white light visible at least 500 feet from the front of the tractor and at least one red light visible at least 500 feet from the rear of the vehicle. Two red reflectors with a diameter of at least four inches may be used in place of the red light.
- Drivers of vehicles on a highway must give clearly visible and proper signals to other drivers of their intended movement and insure that such maneuvers can be done safely.
- Drivers operating equipment on highways with speed limits at least 45 mph, must give a signal of intention for the last 200 feet traveled. On roads with speed limits lower than 45 mph, the requirement is the last 100 feet traveled before turning.

“A car traveling 55 mph can close a 300-foot gap (length of a football field) and overtake a tractor at 15 mph in about 5 seconds. At 65 mph, that time drops to 4 seconds.”

Tom Bean, Agricultural Engineer
Ohio State University

* Statistics taken from “A Study of Farm Vehicle Crashes in North Carolina.” J. Kevin Lacy, William Hunter and Herman Huang, University of North Carolina Highway Safety Research Center, 2001
Sergeant Tom Futrell
Flashing Strobe Light
FARM Saf Kit – equipment marking
Metal-backed SMV emblem
“Safety Kits”
Be Seen & Be Safe Highlights

• Educational trainings held in each of the 7 counties in project service area. Program researched and prepared by Extension Agents
  – Exhibit Display developed
  – Brochures developed and distributed
  – “Safety Kits” assembled
• Over 1000 farmers and farm employees attended highway safety training
  – PRE/POST tests indicated a 71% increase in knowledge
**Be Seen with Properly Displayed**

- **Glow Moving Vehicle Signs**
  - For equipment that travels less than 25 mph
  - Locate on the rear of the vehicle, near the center and 2'-6' above the ground

- **Reflective Tape**
  - Mount red and orange tape horizontally on the back of equipment with red on the outside and orange on the inside.
  - Mount yellow tape on the front and sides of farm equipment at the corners.

- **Strobe Lights**
  - Mount on tractor or implement
  - Significantly increases visibility of equipment

**North Carolina has highway laws that cover...**

- Age of operator
- Operation of tractors at night
- Visible and proper signals
- Equipment traveled with giving a signal

**Be Safe**

With Farm Equipment on the Highway
Be Seen & Be Safe Highlights

• Spanish version of “Be Seen & Be Safe” training offered for project service area
  – Brochures and presentation were translated into Spanish

• Videotape prepared for each Extension Agent for farmers to utilize for Spanish speaking employees who did not attend training.
Impacts of “Being Seen & Being Safe”

• 21.7% reduction in crashes involving farm equipment
  – Save lives and prevent serious injuries
  – Decreased insurance claims
  – Decreased farm liability
  – Avoid increased insurance premiums
  – Avoid lawsuits
BE PROACTIVE and “Be Seen and Be Safe”