EOP: ECONOMICS OF PREVENTION PROGRAM

Community Relevant Economics for Rural Areas: Focus on the Social Costs of Injury & Prevention

FIRST, SOME BACKGROUND

Agriculture consistently ranks among the most dangerous occupation in the U.S. Every year hundreds of farm workers die from on-the-job injuries (tractor roll-overs being the leading cause). In 2012, the fatality rate for personnel working on farms was 20.2 deaths per 100,000 workers, a rate seven times higher than the average fatality rate in the private sector.

Startlingly, many of these deaths occur in the youngest workers. On average, 113 people younger than 20 die annually from farm-related accidents. Most of these deaths occurred in youth 16-19 years of age. Tractors and All-Terrain Vehicles cause the majority of these injuries. Of the leading sources of fatal injuries to youth, 23 percent involved machinery (including tractors), 19 percent involved motor vehicles (including ATVs), and 16 percent were due to drowning.

Besides losing family members and friends, there are economic and social losses to take into account. Every day about 167 agricultural workers suffer from lost work time due to injuries, many of which become permanent. These mishaps cost time and money, but the collateral damage here could impact hundreds of families.

SAFETY MEASURES TO PREVENT TRAGEDY

Research shows that the most efficient way to prevent tractor roll-over deaths is with a Roll-Over Protective Structure or ROPS. Still, in 2012, only 59 percent of tractors were equipped with the devices.

In fact, ROPs in combination with seat belts are 98 percent effective in preventing tractor operator deaths from overturns and ejections from the tractor seat.

Head injuries are the leading cause of ATV-related deaths among children. Studies show that teens drive frequently without using a helmet, with one study showing as many as 40 percent not wearing helmets.

Culturally directed training practices include mandatory education programs to raise awareness to the dangers of these activities. These programs need to be supported by research institutions to help ingrain these preventive measures.

Education Equals Prevention

The Southeast Center for Agricultural Health and Injury Prevention (SCAHIP) has dedicated more than a decade of research and outreach to help address the issues of agricultural health and safety.

The Economics of Prevention Program has been working to integrate agricultural safety materials into school curricula as well as provide resources to the public to help prevention efforts for more than 10 years.

More about EOP project

The EOP project is funded by the National Institute of Occupational Safety and Health (NIOSH) Cooperative Agreement No. 2U54OH007547-11. To become a part of this or other SCAHIP efforts, contact us at 859-218-3677 visit our website at www.mc.uky.edu/scahip, or follow us on Facebook and Twitter.

Central Appalachian Regional ERC

EOP PROGRAM: EDUCATION, QUALITY MATERIALS, & ONLINE TOOLS

Training Pre-Career Professionals

The EOP Program uses an innovative train-the-teachers strategy to promote safety awareness and use of low cost injury-prevention strategies.

Community School Programs

Interactive, online materials for high school and community education programs

Highly Effective Materials

The EOP program has teacher tested materials for beginning or advanced students in economics or agricultural economics that have been proven effective to change attitudes and affect behavioral decision-making.

Hazard Ridge

We built upon the success of previous story simulations and cost analysis tools to create a 3D immersive video game called Hazard Ridge. In the game, a rural town where teens are disappearing and the community is going bankrupt is the setting for an investigation of the individual and social costs of agricultural injury. Serious games and multi-user experiences have been shown to be effective learning tools that transfer the learning from virtual situations to real life.

The game incorporates case stories that develop from the circumstances that lead to the injury, to the injury event itself, and the injury consequences. Students can use several interactive cost tools to conduct an economic cost analysis injuries.

Digital Documentaries

Using movies as a means of engaging students in the human side of injury prevention and individual and social costs of injuries is a hallmark of our EOP approach. Check the website for instructions and examples of using documentaries for job safety advocacy.

Assessment Materials

Demographic questionnaires, pre- and post content knowledge and attitude surveys are available for teachers and extension personnel.

Online Resources and Links to National Safety Databases

Links to Internet resources, feedback from users and other helpful support information is available at eoponline.org

REACHING AT-RISK TEENS AND ADULT FARMERS IN RURAL COMMUNITIES

Targeting the Right Audience

The EOP Project intervention materials target four categories of injury related to living or working in agricultural or rural areas.

Crush injuries from ATV or Tractor roll overs, motor vehicle, farm equipment collisions, traumatic brain injury from ATV or riding falls and hearing loss from exposure to loud noise are among the most prevalent injuries to at-risk adolescents and adult farmers.

Delivering the Information

The school is at the center of most rural communities. Proven safety intervention models show that reaching at-risk teens and adult farmers where they work and meet is the most effective means of delivering important safety information.

Using a System that Works

The Economics of Prevention Program uses a unique approach AND reaches at-risk teens where they are each day — in their high school classrooms. The Program helps students, teachers, parents and community members see that agricultural injuries have both individual and social costs.

With this training, pre-career teachers and extension agents can act as safety advocates in their communities. EOP materials are designed to integrate into state and national subject areas content standards for use in any high school classes.

Materials are teacher-tested and proven effective. Quality Economics curriculum materials are hard to find, so contact EOP for more information or visit our website eoponline.org

Sources: 1. Bureau of Labor Statistics (BLS), United States Department of Labor. Occupational Injuries and Illnesses and Fatal Injuries Profiles database queried by industry for Agriculture, Forestry, Fishing and Hunting (GP2AFH), Accessed June 2013.

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3. Myers, M. & Pana-Cryan, R. (2003) Prevention effectiveness of Rollover Protective Structures – Part III: Economic Analysis. Journal of Agricultural Safety, 6(1): 57-70.

4. Myers, M.L., Cole, H.P., Mazur, J., Issacs, S. (2008). Economics and safety: Understanding the cost of injuries and their prevention. Prof Safety, 53(4), 37-45.

5. Myers, M.L., Cole, H.P., & Mazur, J.(2009). Cost-effectiveness of wearing head protection on ATV's. J of Agromedicine, 14(3): 12-323

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