Tips for the "Tractors, Farm Safety, and Economics" CD-ROM Simulation Exercises

Two interactive simulations are included on the CD-ROM found in the plastic pouch that follows these "Tips." These four pages describe the content and purpose of the two simulations, their learning objectives, and how to use the programs. The instructions for installing the programs are printed on the back of the CD label. Instructions for navigating through the programs are provided within the CD. The first program on this disc is "The Kayles' Difficult Decisions" simulation exercise. The second program is titled "Preventing Tractor Overturn Injuries." Each of the programs is described below.

The Kayles' Difficult Decisions Simulation

The Kayles' simulation was field tested with 400 people including adult farmers and farm community high school juniors and seniors. The simulation stresses farm planning and management that includes attention to economics, productivity, labor, and safety. The scenario is based on real cases. The good and bad decision alternatives included in the simulation are behaviors exhibited by farmers in situations similar to those depicted in the simulation.

Kayles' Simulation Summary

Read this section to determine if the simulation is appropriate for your organization or group. If you choose to use the simulation, work through the CD before administering the simulation to others.

Format: Interactive CD-ROM simulation exercise with feedback, follow-up notes and discussion topics embedded in the program and available to the learner as he or she desires.

Audience: High school students in social studies, health, and vocational agriculture classes. Young and adult farmers. Farm family members, farm community groups, agencies and persons who provide services to farm family members.

Length: The simulation includes 10 major issue (problem) areas each requiring decision alternatives. The objective is to select the correct decisions and to avoid poor choices. A few open-ended questions are included at the end of the exercise. These questions stimulate discussion and generalization of the exercise content to the lives and predicaments of farm family members and other persons who complete the exercise. The simulation requires from 60 to 90 minutes, and some people spend up to 45 to 60 minutes more to further review and discuss the materials.

Setting: The Kayle farm is a 125-acre tobacco and beef cattle operation in central Kentucky. The Kayles have 60 brood cows on 91 acres of pasture, 6 acres of tobacco, 10 acres of corn silage, and 18 acres of improved hay. Details of the farm, its equipment, labor force, and financial situation are provided in the simulation.

Scenario: During the first harvest following the purchase of their neighbor's farm, the Kayle's son, Billy is seriously injured in a tractor overturn. Although he eventually fully recovers, the simulation is designed to help farm family members appreciate the personal and productivity impacts of such an injury event, and the dilemmas faced by the entire family. The exercise also illustrates and reinforces the economic, emotional, and social benefits of rollover protection structures (ROPS) for tractors, proper supervision of youth workers, good equipment maintenance, safe work practices and basic first aid skills.

Learning Objectives for the Kayles' Simulation

In the context of the exercise scenario, the participants will:

1. Assess potential good and bad consequences of a decision to expand a farming operation.

2. Recognize and review the relationships among farm expansion, increased workload, labor needs, debt, productivity, profitability, and cash flow.

3. Recognize and appreciate that labor (like money, land, and equipment) is a scarce resource that should be planned and managed carefully.

4. Recognize and appreciate the long-term injury-reduction potential and economic benefits of ROPS-equipped tractors, equipment maintenance, and safe work practices.

5. Assess and recognize actions and risk factors that contribute to unintentional injury including poor maintenance of equipment, labor shortages during peak periods, fatigue, weather and crop harvesting pressures, among others.

6. Discriminate among good and poor emergency care alternatives when a serious farm injury occurs.

7. Recognize and evaluate the direct, indirect, emotional, and social costs of a serious injury to a farm family member and the threat these costs pose to continued farming as a way of life.

8. Assess and recognize the severe negative impact of injury events on farm finances, productivity, and workload.

9. Generate and discuss personal plans and strategies to prevent their own farm family from encountering similar injury events and suffering financial and personal loss.

10. Recognize the value of systematic and ongoing planning and management of farm production, labor, and finances as an overall strategy by which to increase productivity, reduce debt, and reduce risk of costly injury events.

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How to Use the Kayles' Simulation

1. Review these "Tips." Decide if the exercise is relevant for groups or the persons with whom you work.

2. Work through the exercise CD-ROM yourself. Answer each of the questions. Then compare your answers to the feedback. Check the follow-up notes for specific issues and questions to learn more about any particular points of interest.

3. Present the exercise by giving each person or pair of persons a copy of the CD. Then ask the members of the group to begin the exercise by following the instructions on the inside of the CD-ROM cover.

4. When members of the group have completed the simulation, conduct a discussion among the entire group. The group discussion is likely to identify major issues, needs for more information, and disagreements about the merits of specific decision alternatives.

5. Conclude the activity by asking the participants to describe what they can do on their farms to promote productivity while decreasing risk of injury. Refer to Question K and its feedback to help facilitate this discussion.

Preventing Tractor Overturn Injuries

This is an interactive program that provides information about the frequency, severity, and cost of tractor overturn injuries. It also provides information and examples of the injury prevention and cost effectiveness of installing Roll Over Protective Structures (ROPS).

Program Content

The program consists of four sections. The first section presents charts and graphs that illustrate the frequency and severity of tractor overturns and the effectiveness of ROPS for preventing injuries during overturns. The second section presents 10 color photographs of fatal and non-fatal tractor overturns. Each photo is accompanied by a factual account that explains what happened. The third section includes videotapes of model tractors and real farm tractors overturning in real time and in slow motion. These short video clips show how rapidly overturns occur and the violent forces they produce. The fourth section includes color photographs of many farm tractors with and without ROPS. Users are asked to indicate whether or not each tractor has an approved ROPS. Immediate feedback is provided for each response.

Format: Interactive CD-ROM multimedia with feedback. The user may locate and interact with any part of the program at will at anytime.

Audience: High school students in social studies, health, and vocational agriculture classes. Young and adult farmers. Farm family members, farm community groups, agencies and persons who provide services to farm family members.

Length: The entire interactive program can be completed within 20 minutes. Some users may require more time as they choose to replay parts of the program.

Learning Objectives for the "Preventing Tractor Overturn Injuries" Program

In the context of this multimedia program, the participants will:

1. Become more aware of the frequency and consequences of tractor overturns and the effectiveness of ROPS and seat belts for preventing costly injuries during such events.
2. Examine photographs and factual reports for four fatal and three non-fatal tractor overturns.
3. View and rerun as many times as is desired, short videotape clips of model tractors and real tractors overturning with simulated operators either protected or not protected by ROPS and seat belts.
4. Appreciate that tractor overturns happen very rapidly and too fast to allow a person to jump from an overturning tractor.
5. Identify tractors with approved certified ROPS and those without certified ROPS.

How To Use the "Preventing Tractor Overturn Injuries" Program

1. Review these "Tips." Decide if the program is relevant for groups or the persons with whom you work.
2. Work through the CD-ROM program yourself.
3. Present the exercise by giving each person or pair of persons a copy of the CD. Then ask the members of the group to follow the instructions in the CD-ROM and to explore the program.
4. When members of the group have completed working with the program, ask them to describe and discuss what they have learned.
5. Conclude the activity by asking what they can do to protect themselves and other family members from tractor overturn injuries.