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'Childproofing' Your Yard or Farmstead[1]

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Overview

Parents strive to make their homes as safe as possible for children, but children can face life-threatening dangers literally 'in their own backyards.' Yards, garages, work areas, barns, etc. may present situations which would not endanger an adult, but can be deadly to a child. These situations occur not only on farms but also in cities and suburbs and on acreages.

A July 1999 incident in Lake Wales, Florida points out the dangers to children who play around stored equipment or materials. In this incident, a 4-year-old boy was playing with the family's dogs on a stack of telephone poles that were to be used for building a fence. One pole dislodged from the stack and pinned him, resulting in his death.

Cases to Consider

Examples taken from a 1999 report by the Great Plains Center for Agricultural Health also illustrate the results of unsafe storage.

Case 1: Bale Fork Tips Over

A 7-year-old girl died when she was pinned beneath a round-bale fork in the yard of her family's home. The hay fork, which is used to move large round bales of hay, mounts on a front-end loader. It was unattached from the tractor and was sitting in grass next to the driveway with spikes pointing forward. Apparently, the girl was playing on the spikes and the fork tipped over. The weight of a 7-year-old girl was enough to tip over a 300-pound fork because it was top-heavy and unsupported.

Case 2: Shipping Crate Falls

A 6-year-old boy was killed while playing in a building at his home. The boy's father had purchased a piece of equipment that was still in a wooden shipping crate. The boy's older brother had backed a pick-up truck into the building, slid the crate off the edge of the pick-up, and then leaned the crate on edge against a wall. The 400-pound crate had horizontal wooden members, similar to a pallet. The boy apparently was climbing up the side of the crate when his weight pulled the crate over. It fell on him and killed him.

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Case 3: Trailer Pins Girl

A 4-year-old girl was killed while playing on a utility trailer. She was reported missing at about suppertime. After a two-hour search, she was found pinned under a utility trailer that had been leaning against a building. The frame had horizontal sections that the child was able to climb; the tongue extended six feet up the wall.

Case 4: It Only Takes an Instant

A Michigan dairy farm couple learned how quickly a near-tragedy can happen.

The wife took their 21-month-old son into the barn where she was going to milk the cows. She didn't bring the playpen she usually kept him in while doing chores. She thought that he would stay close to her because the couple's other three children were nearby.

But the son followed the couple's daughter out to see the family's horse. As the husband was loading the feed cart with the skid-steer loader, he noticed the daughter, but he overlooked the infant son.

As he backed up a hill, the husband felt a bump, which, unfortunately, was his infant son. The couple called for help immediately, and the son was soon flown to the hospital. His only serious injury was a severely broken leg.

The couple said that the experience taught them to be more careful. They said that it was easy for them to take the heavy equipment around their farm for granted. They would never think of letting their children play around similar equipment at a trucking firm or at a construction site, for example.

Case 5: Play Can Be Explosive

A 1989 incident in the Midwest shows the dangers of children playing with what appears to be a harmless device.

Two 4-year-old twins were playing while their father filled his pick-up's LP gas converter tank. One of the twins picked up a cattle prod and "zapped" the tank, causing an explosion that severely burned both twins. (LP gas is heavier than air, so the vapors traveled along the ground and were ignited by the spark.)

Although the twins survived, one of them was burned over 55-65 percent of his body, and the other one was burned over 35-40 percent of his body.

The incident could have been avoided if the cattle prod had been stored out of reach of the 4-year-olds.

Case 6: Risks from Broken Equipment

A farmer's close call in 1998 points out another type of danger. The farmer had climbed into the gravity box mounted on a wagon to push corn from the box into a silage bag.

Suddenly, the box tipped off the wagon's chassis, catapulting the farmer away from it. The farmer slammed into the ground and then rolled 15 feet. He suffered a cracked pelvis, but recovered from the injury.

When he inspected the wagon, which he had borrowed from a neighbor, the farmer discovered that the two rear brackets holding the gravity box to the chassis were not fastened. In addition, the right front bracket had been cracked earlier and the weld that had been used to repair it had broken. The left front bracket was fastened, but it had bent when the wagon went over.

If children had been playing on the wagon while it was stored, it might have fallen at that time and the children might have been injured more seriously than the farmer was.

Examples of Other Cases with Stored Materials

Other cases have involved children climbing on tractor tires that were stored by leaning them against the wall of a building. Tractor tires can weigh 1200-1500 pounds.

Climbing on bales also has killed children.

How Much Do You Know?

The high number of farm-related injuries to children shows a need for safety. Test your knowledge with this quick quiz.

1. Usually children are injured on the farm when they are involved in chores or are working? True or False.

2. Identify the four major hazard areas that pose dangers to children on the farm.

3. Children identify with safety habits followed by adults in their daily routines. True or False.

Answers at end of publication.

Figure 1.

Solutions

Safety Audit

Parents can increase their family's awareness of dangers and reduce risks by conducting a safety audit.

- To perform the audit, walk through your farms, homes, shops, and garages, then eliminate hazardous situations and change procedures for storing equipment and material to minimize dangers to children.
- Be sure to include children in the safety audit so that they will gain an appreciation of potential dangers. They respond better if shown "why" rather than just being told "don't".
- Bear in mind that children see the world from a lower vantage point than adults do. With this in mind, get down on your hands and knees during the safety audit so you can see hazards that may not be apparent when you're standing.
- Think about past "close calls" or potential future situations that might cause injuries. Determine the factors that were or could be responsible for a near-miss and attempt to explain them to children who are mature enough to understand.

General Solutions

- Remember that children who visit you are especially fascinated with new things to climb on. These situations occur not only on farms but also in cities and suburbs and on acreages.
- When items must be stored by leaning them against a wall, provide anchors and supports so that they won't fall. Test stored items to ensure that they are properly secured.
- Never allow children to enter a farm building alone. Lock silos and bins. Climbing on hay can be especially dangerous because it easily can fall on children.
- Fence off hazardous areas, including retention basins and ponds, to prevent access to them.
- Consider how an item appeals to children. Horizontal bars or members of any item are an invitation for climbing and exploration.
- Keep children away from work areas.
- Prevent children from playing on machinery by storing it in a locked or fenced area when possible.
- Remove all keys from equipment when it is not in use, and keep the keys out of reach.
- Keep hydraulic equipment, such as front-end loaders, in a down position when not using them. Hydraulic failures can result in severe crushing incidents. Systems can fail while being stored.
- Lock the brakes on self-propelled equipment.
- Store hand tools and power tools out of reach.
- Lock sheds.
- Lock unloaded guns in a separate location away from locked ammunition.

- When feasible, place unused tires flat on the ground. If necessary to prop, make sure that they are chained or anchored to the wall. Tractor tires can weigh 1200-1500 pounds each.

- Cap wells. The danger of uncapped wells captured the world's attention in October 1987, when 18-month-old Jessica McClure of Midland, Texas was trapped at the bottom of a 22-foot-deep well for 58 hours.

Pesticides

At least half of U.S. citizens who die from pesticides are children under age 10. Follow these tips to reduce pesticide risks to children:

- Understand how children are poisoned.

  They are attracted to containers and bright colors.

  They want to imitate parents by "working" with chemicals and containers.

  Children often want to put things into their mouths.

- Know what's dangerous. Unsafe items include:

  pesticides and fertilizers;

  soaps, bleaches, starch, stain remover, and other cleaning products;

  drain cleaner; dairy pipeline cleaner;

  paints and related products;

  fuels;

  treated seed.

- Keep toxic substances in their original containers which have labeling about first-aid procedures and chemicals involved.

- Keep gas and fuel in proper containers.

- Keep all toxic substances (including spigots, hoses, pumps, and rags) on high shelves in either a locked building or inaccessible area.

- Never leave toxic products unattended during use and avoid using poisons in front of children.

- Discard dangerous substances properly in a way that children do not have access to them.

- Post "Danger" signs around locked chemical storage areas. Teach children who can't yet read the meaning of the danger symbol.

Potential Falls

Falls from farm machinery and in buildings are a major cause of injuries under age 9.

One grandfather walked out of the shed to find his 3- and 6-year-old grandsons at the top of the grain auger system, 60 feet in the air. Fortunately, he got them down safely. His solution was to cut off the bottom six feet of the ladder and install a quick-attach mechanism on the ladder. The lower section of the ladder was then stored in a nearby shed. Thus, anyone needing to use the ladder had easy access to it, but unauthorized climbing was eliminated.

Ladders on silos, grain bins and similar structures that go all the way to the ground should be secured in a way that is designed to prevent children from climbing them. A simple barricade can be made with plywood, hinges, and a padlock.

Grain Storage

One-third of all entrapments and suffocation in flowing grain involve children under age 14. Follow these tips with grain storage equipment and buildings.

- Never allow children to play in grain, ride in grain wagons, or get into bins or hoppers. Grain may fascinate children, but it acts like quicksand when flowing. A child can be completely covered in as little as 10-15 seconds.

- Never allow children into areas in which grain is loaded or unloaded.

- Never leave an auger or wagon unattended. Grain incidents happen quickly. The forces on a body submerged in grain make rescue almost impossible.

- Post warning decals on wagons and bins.

Electrical Equipment

Electricity is always a danger for children. Follow these tips with wiring and electrical equipment.

- If you have children under age 3, keep cords out of their reach to prevent kids from being burned by chewing on the cords, pulling down the appliance, or becoming strangled.

- Keep children away from areas in which heaters or fans are running.

- Unplug tools and appliances and store them securely after you use them.

Play Areas

Designated play areas protect children by isolating them from farm work equipment. However, this does not eliminate the need for supervision.

One play area might be the porch of the farmhouse and the surrounding yard. A fence will reinforce the division between the work and play environments.

Try to provide appropriate play items, such as swings, scale models of farm equipment, toys, a sandbox, or playhouse, that make the play area appealing to children.

Educational Projects

Vicki's Visit

The University of Florida agricultural safety specialist has worked with staff at the University of Kentucky to develop a series of interactive stories to provide education about safer practices.

Vicki's Visit concerns a girl who visits her cousins on the farm and comes across a variety of "neat" things to play with.

The story forms the basis for an activity in which both children and their parents can participate. The University of Florida Agricultural Safety program also can provide examples of hazard identification and walk-around activities that allow children and parents to identify potential hazards and find solutions.

The "Vicki's Visit" activity and other safety resources may be obtained from the state agricultural safety specialist, or check the Florida AgSafe Network Web site: <http://www.flagsafe.ufl.edu/>.

Guidelines for Agricultural Tasks

The state agricultural safety specialist also serves as a primary adviser for the North American Guidelines for Children's Agricultural Tasks Project, which in June 1999 published booklets that help parents match their sons' and daughters' abilities with requirements of agricultural jobs.

The guidelines were developed because children often aren't mature enough or coordinated enough to drive tractors, hitch equipment and care for livestock, and the guidelines help parents understand what's reasonable.

A link to the Guidelines can be found at the Florida AgSafe Network Web site:

<http://www.flagsafe.ufl.edu/>

Sources of Help

You may obtain more information on Agricultural Safety at the Florida AgSafe Web site:

> The Florida AgSafe Network -- A service of the Agricultural Safety Program of the University of Florida's Cooperative Extension Service. <http://www.flagsafe.ufl.edu/>

At this site, there are many other resources listed for home and farm safety, as well as emergency and disaster materials.

You may also contact your local county Extension office.

References

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Answers to "How Much Do You Know?"

1. False

2. Machinery and equipment; livestock areas; farm buildings; farm workshop,

3. True.