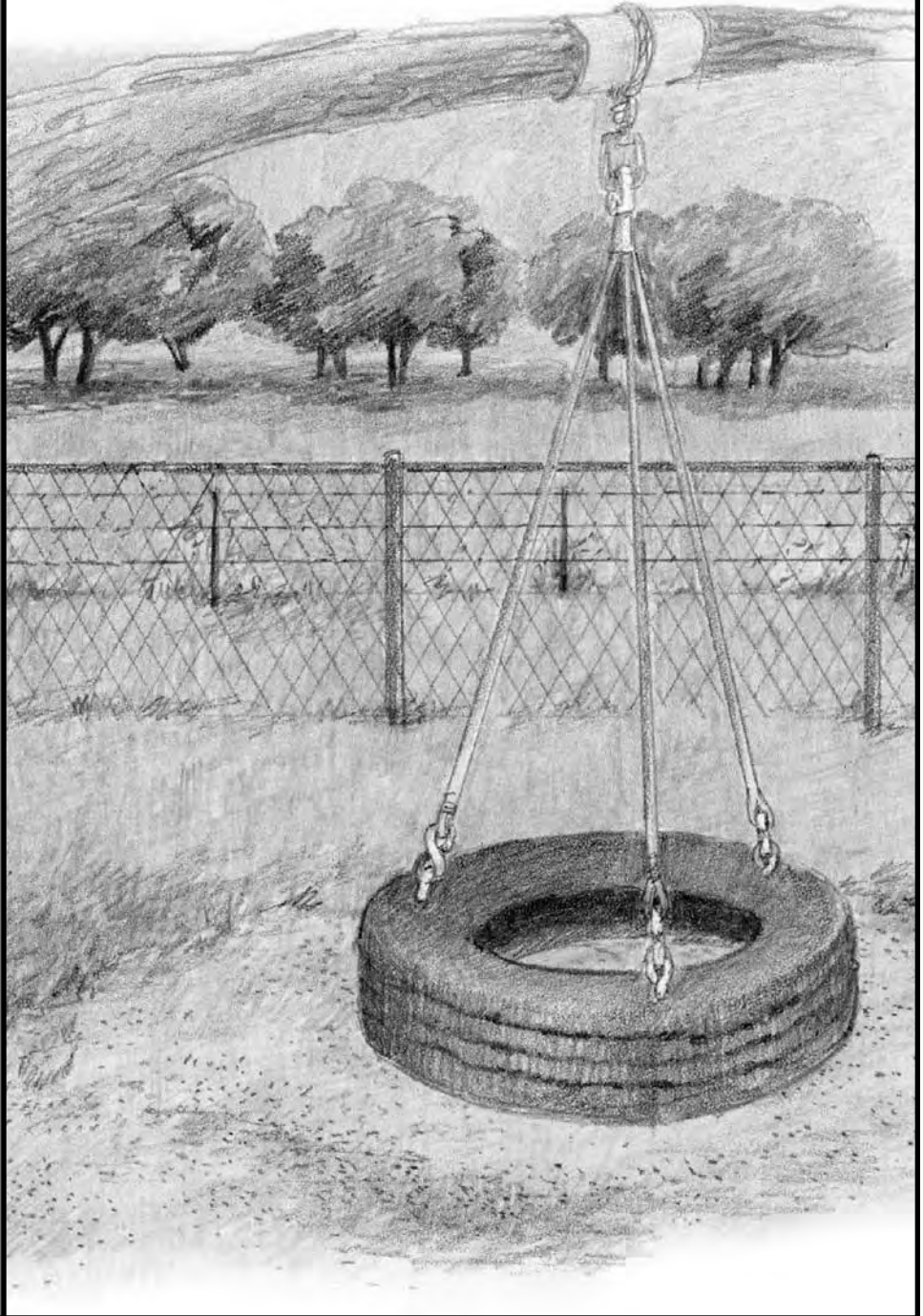


# Creating Safe Play Areas on Farms

2010 Mini-Edition



National Children's Center  
for Rural and Agricultural Health and Safety



National  
**Farm**Medicine  
Center.



**Marshfield Clinic**<sup>®</sup>  
Research Foundation

**Play areas are not a substitute for careful, competent supervision.**

*If adequate supervision is not available in the home or play area, parents or guardians are responsible for seeking off-site childcare.*

## What is a Safe Play Area?

A safe play area is a carefully planned, designated location with limited exposure to hazards such as traffic, agricultural production and environmental concerns. With effective adult supervision, safe play activities allow children to experience physical, emotional, social and intellectual development.

### **The play area on a farm should be:**

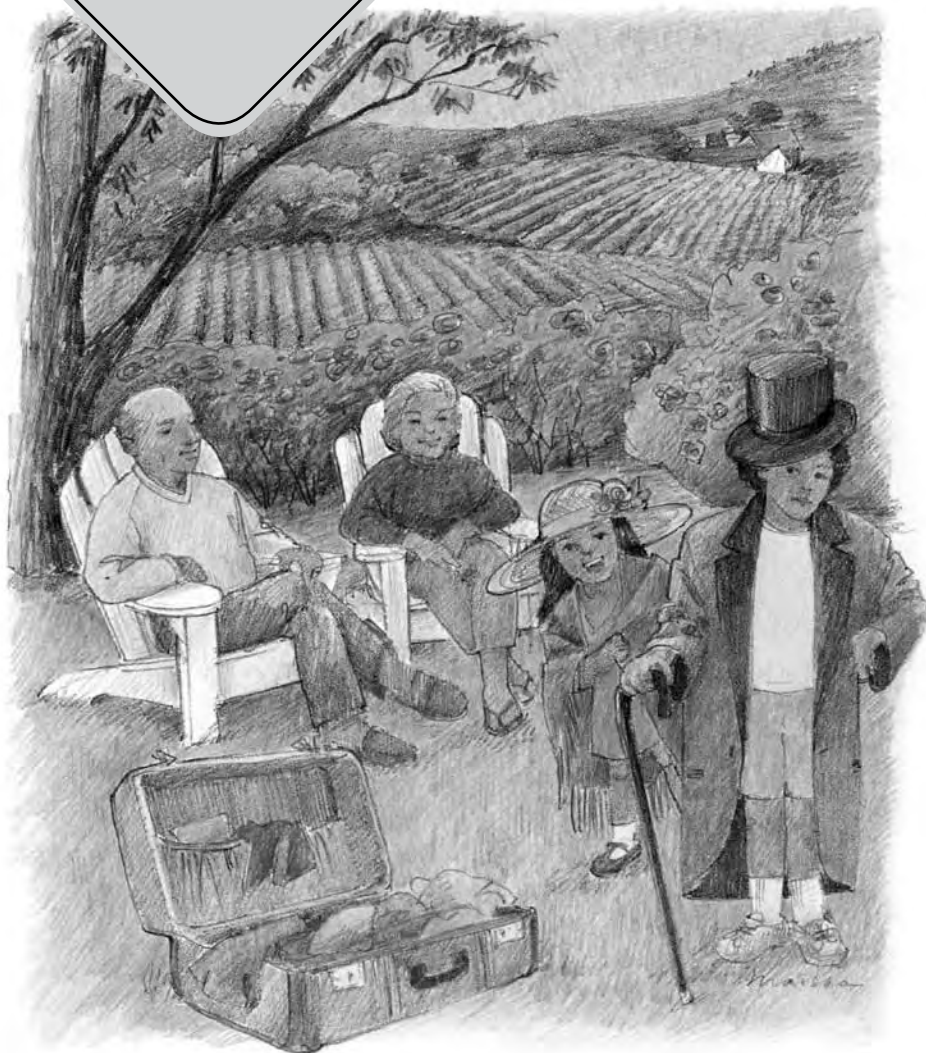
- Within sight and sound of a responsible adult
- Developmentally appropriate for the child's age
- Away from environmental, structural and machine-related hazards
- Designated by boundaries or physical barriers such as a fence
- Supplied with protective ground surfacing to minimize fall related injuries
- Full of play opportunities
- Maintained

### **Leading causes of serious play-related injuries include:**

- Falls from play equipment onto unprotected ground surfacing
- Strangulation by clothing that becomes entangled on vertical protrusions and projections greater than  $\frac{1}{8}$  inch
- Head entrapment from entry into an opening between  $3\frac{1}{2}$  and 9 inches
- Injuries resulting from equipment tip-over

### **Warning**

Remove neck and hood drawstrings from children's clothing before playing



### **Effective Supervision**

Good adult supervision involves careful, attentive monitoring of a child. While the home is often perceived as a fairly safe, controlled environment not requiring stringent supervision to children, the area outside the home on a farm can be unpredictable and uncontrollable, even within established boundaries of a safe play area.

The proper amount of supervision depends on the age of the child, the number of children engaged in play, the type of play occurring and the location of play.

The following supervision types are recommended for a safe play areas on a farm:

- Constant supervision means that an adult is always within sight and sound of a child.
- Intermittent supervision occurs when an adult is out of sight and sound for up to 15 minutes.
- Periodic supervision involves visual observation of a child at least every 15 – 30 minutes.

Review the Child Development information to determine the type of supervision needed.

Developmental Characteristics	Safety Issues
<b>6 – 23 months</b>	
<ul style="list-style-type: none"> <li>• Has difficulty with balance</li> <li>• Fascinated by movement</li> <li>• Enjoys pretend play</li> <li>• Likes to explore surroundings</li> <li>• Experiments with sense stimulus (touch, smell, taste)</li> <li>• No sense for danger</li> </ul>	<ul style="list-style-type: none"> <li>• Provide constant supervision</li> <li>• Requires fenced play area with latched gate</li> <li>• Avoid uneven or slippery surfaces</li> <li>• Keep away from moving machinery</li> <li>• Place chemicals and sharp objects out of reach or locked up</li> <li>• Following play provide good hand washing</li> </ul>
<b>2 – 5 year olds</b>	
<ul style="list-style-type: none"> <li>• Energetic</li> <li>• Can jump over objects 5 – 6 inches high</li> <li>• Balances and hops on one foot</li> <li>• Can solve problems if simple and concrete</li> <li>• Will play alone or with others</li> <li>• Enjoys mimicking adults</li> <li>• Does not understand hazards</li> <li>• Has illogical and imaginative thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Provide constant supervision</li> <li>• Requires a physical barrier from work areas</li> <li>• Attracted to adult farm activities and will want to help</li> <li>• Watch for tripping hazards</li> <li>• Teach and require child to wear safety helmet</li> <li>• Teach and provide good hand washing after play</li> </ul>
<b>6 – 8 year olds</b>	
<ul style="list-style-type: none"> <li>• Poor hand eye coordination</li> <li>• Seeks parental approval</li> <li>• Operates with concrete facts, unable to have abstract thoughts</li> <li>• Enjoys quiet activities</li> <li>• Curious about how things work</li> <li>• Short attention span, like to remain active</li> </ul>	<ul style="list-style-type: none"> <li>• Provide constant supervision, child will attempt adult activities to impress parents</li> <li>• Child is not ready for responsibility</li> <li>• Set boundaries for play area and enforce rules</li> <li>• Require safety helmets when appropriate</li> <li>• Require handwashing after play</li> </ul>
<b>9 – 10 year olds</b>	
<ul style="list-style-type: none"> <li>• Has good coordination, but will have awkward moments</li> <li>• Desire peer and social acceptance</li> <li>• Desires to be independent from adults, will attempt to do activities without adults</li> <li>• Successes are important</li> <li>• Improvements in reaction time</li> <li>• Specialized motor skills have developed</li> <li>• Body strength and dexterity increase</li> <li>• Do not fully understand consequences</li> <li>• Risk taker</li> </ul>	<ul style="list-style-type: none"> <li>• Provide intermittent/periodic supervision during play</li> <li>• Set and enforce simple rules on boundaries of the play areas</li> <li>• Reward child for good behavior</li> <li>• Do not allow child to be an extra rider or to operate machinery</li> <li>• Assigns low risk tasks with hand tools</li> <li>• Remove keys from ignition of tractors and other vehicles; keep keys in safe location away from children</li> <li>• Instruct children to stay away from work area</li> <li>• Instruct farm workers to return child to safe play area if found in work area</li> <li>• Provide safety helmets</li> <li>• Require handwashing after play</li> </ul>

# How Do I Build a Safe Play Area?

## Select a site that is:

- Away from the majority of farm activity (traffic, animals, equipment, hazardous airborne particles, noise, etc.)
- Sheltered from the elements, sun, wind and dust
- Free from pests (bees, snakes, rodents) and hazardous plants (stinging nettle, poison ivy)
- Partially shaded (30% shade is recommended)
- Level
- Free from obstacles (roots, overhead electrical wires)
- Free from open water (pond, water tank)
- Within sight and sound of a responsible adult

## Plan and design

Take into account the ages of the children who will be using the play area and plan and design it according to their developmental characteristics and abilities.

- Prioritize what activities your children like to do
  - Imaginative role play
  - Manipulate objects
  - Socialize and interact with other children
  - Physical activities
  - Quiet/observe
- Rank the play activities according to the users, resource requirements (cost, time to build, expertise) and the site characteristics
- Determine what needs to be built or purchased (stage, sandbox, swings, bike path, table, gardening items)
- Draft a layout of the play area (keep 6' of space around play equipment in all directions where you will need protective ground surfacing)
  - Some play equipment will need more than 6' of space, for more details visit the Consumer Product Safety Commission's Outdoor Home Playground Safety Handbook: <http://www.cpsc.gov/cpscpub/pubs/324.pdf>
  - Try to minimize any sight barriers or blind spots for effective supervision.
- Assemble play equipment according to manufacturer's instructions
  - Follow manufacturers instructions for anchoring



## Surround the site with a child protective barrier

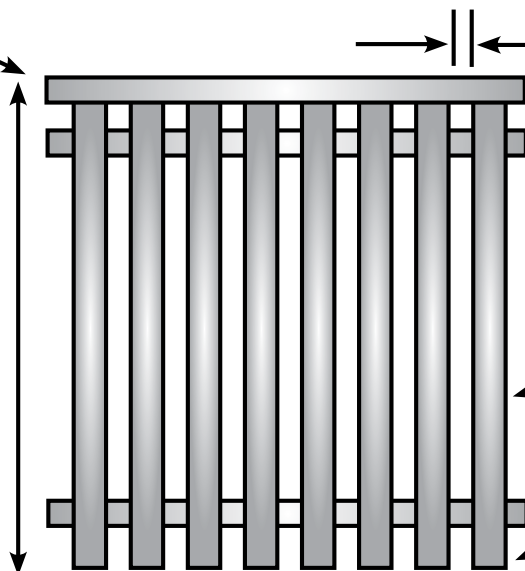
Fences or barriers are the most important feature of a safe play area and usually the most expensive.

- An ideal barrier is a fence with a self latching gate.
- Fencing should be sturdy, easy to maintain.
- Fencing should be a minimum of 4 feet high and free from pinch points and sharp edges.
- Fencing support posts should have a maximum width of 30 inches.
- Fences should NEVER be used as a dual-purpose animal confinement boundary AND safe play boundary.



<b>Recommended Fencing</b>	
<b>Type of Fencing</b>	<b>Attributes/ Concerns</b>
<b>Mesh</b>	<ul style="list-style-type: none"> <li>• Can be fitted to existing fence</li> <li>• Attach mesh to railing to prevent sagging</li> <li>• Can unravel leading to ineffectiveness (reinforced vinyl borders on all 4 sides is recommended to reduce this).</li> </ul>
<b>Panel</b>	<ul style="list-style-type: none"> <li>• Challenging to climb</li> <li>• Some models do not allow for visual supervision from outside</li> </ul>
<b>Privacy</b>	<ul style="list-style-type: none"> <li>• Challenging to climb</li> <li>• Difficult to visually supervise from the outside</li> </ul>
<b>Wrought Iron</b>	<ul style="list-style-type: none"> <li>• Challenging to climb</li> <li>• Space between vertical members must be less than 3 inches</li> <li>• Avoid models with spikes – can cause puncture wounds</li> </ul>
<b>Chain Link</b>	<ul style="list-style-type: none"> <li>• Fence offers long-lasting stability</li> <li>• Easy to climb (can add weaving to minimize)</li> <li>• Cover exposed points - could cause puncture wounds</li> </ul>

Fence height should be at least 4 feet high.



Spacing between vertical boards should be less than 3½ inches to avoid head entrapment or crawl through space.

A horizontal rail on top of the fence avoids neck entrapment.

Avoid footholds that allow children to climb the fence.

Bottom rail or boards should be flush with the ground.

This region can be made from vertical or flat panels.

## Provide protective ground surfacing

Children will fall when playing. Minimize fall related injuries by softening the impact of the body against the ground surfacing. Appropriate surfaces for play areas include loose fill such as: sand, pea gravel, engineered wood fiber, wood chips, or shredded/recycled rubber. Do not use asphalt, concrete or dirt surfaces in places where a child may fall from more than 12 inches. Falling from 8 feet onto dirt is comparable to a child smashing into a brick wall at 30 mph.

### Warning

Pea gravel is considered a choking hazard for infants and toddlers

#### Recommended Groundcover

Type of Groundcover	Concerns/Attributes
<b>Sand</b>	<ul style="list-style-type: none"> <li>• Readily absorbs shocks</li> <li>• 9 inches compressed material – will protect from falls up to 4 feet</li> </ul>
<b>Shredded or Recycled Rubber</b>	<ul style="list-style-type: none"> <li>• Readily absorbs shocks</li> <li>• Available in lighter colors to avoid excessive heating</li> <li>• 9 inches compressed material will protect from falls up to 10 feet</li> </ul>
<b>Engineered Wood Fiber/ Wood Chips</b>	<ul style="list-style-type: none"> <li>• Falls rarely result in injury</li> <li>• Readily absorbs shock</li> <li>• 9 inches compressed material – will protect from falls up to 10 feet</li> </ul>

#### Ground Surfacing Under Play Equipment

Surfacing Type (9 inches compressed)	Fall Height (Feet) from which a life threatening head injury would not be expected
<b>Sand</b>	<b>4</b>
<b>Pea Gravel</b>	<b>5</b>
<b>Wood Chips</b>	<b>10</b>
<b>Shredded/Recycled rubber</b>	<b>10</b>

*(Consumer Product Safety Commission, 2008)*



## Play Ideas

- Balls to toss or roll
- Bubbles
- Garden
- Low climbing objects
- Playhouse (school, or farm store)
- Sand and water table with cups/funnels
- Sandbox
- Small steps to climb and tires/barrels to crawl through
- Stage
- Swing set

## Examples of low-cost play equipment

**Tractor Tire in Sandbox** – securely bury a tractor tire at least one-third vertically into ground surface below sandbox. Make sure to drill holes on underside of tractor tire to allow for adequate water drainage. Children will climb on the tire and they may fall, therefore, ensure adequate distance from the sideboards and depth of sand that surrounds the tire. Instead of buying expensive sand toys, simply use plastic kitchen utensils, bowls, strainers, pitchers, and funnels. *(Note: Encourage parents to cover sandbox when not in use.)*

**Balance Beam** – use a full length 4" x 4" x 6' wood post. Fix two or three supports on the underside of the post (fastened perpendicular to the post).

Partially bury the supports into the ground surface material. Supports will prevent the beam from tipping over. A tree log cut lengthwise may also be used. Set the balance beam on a level surface.

**Calf Hutch Club House** – begin with an unused calf hutch. Clean and sanitize hutch thoroughly. Have children use their imagination to paint the clubhouse with adult supervision. Securely affix the clubhouse to ground to avoid overturns. Place items such as small table, chairs, and tea set inside to promote group imaginative play. Cut windows on all sides to facilitate air flow and supervision.

**Note:** Play areas should include comfortable rest and shade options for adults while allowing for supervision of the children.



## How Do I Maintain and Improve the Play Area?

Develop a routine inspection and maintenance plan that includes keeping grass mowed, checking equipment for loose or broken parts, adding protective ground surfacing and reviewing safety rules. Allow older children help with inspections and maintenance to enhance their ownership and awareness about possible hazards. Make improvements as needed and modifications as children outgrow the existing play equipment.

## Resources



***Every child deserves a safe place to play.***

### **National Children's Center for Rural and Agricultural Health and Safety**

1000 North Oak Avenue,  
Marshfield, WI 54449-5790

Phone: 1-800-662-6900 or  
715-389-4999

Fax: 715-389-4996

E-mail: [nccrahs@mcrf.mfldclin.edu](mailto:nccrahs@mcrf.mfldclin.edu)

Web site: <http://www.marshfieldclinic.org/safeplay/>

### **Agricultural Health and Safety**

*Farm Safety 4 Just Kids*

<http://www.fs4jk.org>

1-800-423-5437

*National Children's Center for Rural and Agricultural Health and Safety*

<http://www.marshfieldclinic.org/NCCRAHS/>

*National Institute for Occupational Safety and Health Childhood*

*Agricultural Injury Prevention Initiative*

<http://www.cdc.gov/niosh/childag/>

*Safe Kids Worldwide*

<http://www.safekids.org>

1-202-662-0600

*Prevention of Agricultural Injuries*

*Among Children and Adolescents*

*Policy Statement*

American Academy of Pediatrics

<http://www.aappolicy.aappublications.org/cgi/content/abstract/pediatrics;108/4/1016>

*Progressive Agriculture Foundation*

<http://www.progressiveag.org>

1-888-257-3529

### **Playground Safety**

*Home Playground Safety Checklist*

U.S. Consumer Product Safety Commission

<http://www.cpsc.gov/cpscpub/pubs/pg1.pdf>

1-800-638-2772

*National Program for Playground Safety*

(Numerous pamphlets, videos and other playground safety materials available)

<http://www.playgroundsafety.org>

1-800-554-PLAY (7529)

*The Dirty Dozen: A Checklist for Safe Playgrounds*

National Parks and Recreation

Publications Department

<http://www.nrpa.org/content.aspx?id=822>

1-800-626-6772

*Outdoor Home Playground Safety Handbook*

U.S. Consumer Product Safety Commission

<http://www.cpsc.gov/cpscpub/pubs/324.pdf>

### **Region-specific**

*USDA Cooperative State Research, Education Service*

<http://www.csrees.usda.gov/>

Concepts in handout were referenced from: Esser, N., Heiberger, S. and Lee, B. (Eds.) (2003). *Creating Safe Play Areas on Farms*. Marshfield, WI: Marshfield Clinic.