

# Dairy worker safety and health: ATV safety

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When all-terrain vehicles first appeared in the U.S. in the 1970s, they were promoted and sold as recreational vehicles designed to provide “thrills” for the rider.

Riders soon realized that ATVs were useful machines to move through areas not accessible with pickup trucks, four-wheel drives or other motorized vehicles, and it became a popular hunting vehicle.

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ATVs were quickly recognized for their many uses in agriculture as a substitute for pickup trucks, horses and even walking. The machines now are found on all types of farms and ranches, in orchards and forests, in ornamental nurseries and on golf courses.

ATVs are commonly used on dairy farms to inspect cows, push feed, serve as a means of transportation around the farm for workers, and to transport tools and supplies around the farm.

### **Injuries from ATVs**

The Consumer Product Safety Commission, a federal regulatory agency, works with industry to develop and implement standards for safety in consumer products. This agency tracks injuries and fatalities attributed to a product and can recall unsafe products.

Based upon CPSC data, it is recognized that as ATV use increases there has been an increase in injury and fatalities. Continued monitoring of this trend could result in product changes.

### **Safety recommendations**

To reduce the risk of injury or fatality while operating an ATV, follow these safety recommendations:

- ATVs are not toys; manufacturers suggestion children under age 12 should not operate ATVs with an engine size over 70 cc.
- Children under 16 years often lack the emotional maturity and physical size to operate or control most machines. They should not operate adult-sized ATVs or those with an engine greater than 90 cc.

- Never carry a passenger; the unique handling characteristics of an ATV require that the operator shift both weight and position on the seat to steer and control the vehicle. Extra riders hamper the operator's ability to steer and control the ATV.
- Since ATVs are small and low to the ground, they are not as visible as larger vehicles. Lights, reflectors, and highly visible flags should be used to increase visibility.
- Never ride the ATV on public roads. ATVs are not designed for road use and hard surfaces can increase the risk of an overturn incident.
- Avoid using ATVs while alcohol or drugs are in the bloodstream. In nearly 10 percent of all injuries, and in 30 percent of all fatal ATV incidents, alcohol use was a contributing factor.

### **Selecting an ATV for agricultural work**

For most agricultural operations, an ATV with a coil spring shock absorber system, an automatic clutch, reverse gear, shaft drive and a differential with a locking mechanism offer the most versatility for agricultural work.

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PTO capability may be desirable for some agricultural tasks. Check with your dealer to determine what features are best for your operational needs.

#### *Speed and power*

Adult, work-size ATVs come equipped with engines ranging from 90 to 700 cc or more, with gear ratios that allow speeds in excess of 70 mph. The use(s) planned for the ATV should determine the size of the engine and the gear ratios.

There are few, if any, reasons for a maximum speed of more than 25 mph in any agricultural operation. Serious ATV injury incidents increase at higher speeds. Differences between an ATV with a 2 x 4 and 4 x 4 drive train include turning and driving ability on different terrains.

### **ATVs and work hazards**

#### *ATV overturns*

A four-wheeler can do many of the tasks formerly assigned to the small farm tractor. Just as safe tractor operation is influenced by speed, terrain and load size, so is the operation of an ATV. Steep or uneven terrain can cause an ATV overturn to happen quickly.

High speed, uneven ground, ditches or large rocks increase the chance of the ATV being rolled or flipped during operation. Moving the ATV at a slower speed while shifting the operator's weight to the upper side of the slope reduces overturn risk. Selecting an ATV with coil springs and shock absorber suspension systems will help reduce bouncing and pitching from side to side.

#### *Loading and braking*

Trailers that are loaded with firewood or feed may tax the pulling and braking capacity of the ATV. However, an attachment such as a tow-behind mower may have more weight than the braking power of the ATV can handle.

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Heavy loads can push ATVs down slopes with an increased risk of "jack knifing," sliding out of control or being rolled over. Carrying racks and pulled equipment increases the versatility of an ATV and enables it to complete a variety of jobs.

To reduce the risk of a rear overturn, do not carry more than one-third of the ATV's weight on the rear carrying rack. The recommendation is to evenly divide the load between a front and rear carrying rack.

Do not tow a load that weighs more than the total weight of the ATV plus the operator, and only hitch to the manufacturer's hitch point. Follow the manufacturer's recommendations when pulling or towing loaded carts, mowers or other attachments.

The front and back brake of an ATV may operate independently or may have a linking design in which all four brakes work together. Using an ATV with a linked brake system reduces the chances of inappropriately or mistakenly applying the front or rear brake in a way that reduces control of the machine.

Regardless of the braking system used, learn how to brake at differing speeds and when pulling a load to reduce risk of losing control while stopping or turning. The ATV operator's manual can help you understand the machine's braking capacity.

### **Personal protective equipment**

Hazards involved in operating an ATV normally require standard items of personal protective equipment. The nature of some agricultural work, however, may reduce the need for some types of protective equipment. Recommendations are discussed in the context of agricultural work.

#### *Helmet*

A full-face helmet that is the correct size for the operator should always be worn when riding an ATV. While some agricultural uses are at low speeds where a helmet may interfere with close inspection or become unbearably hot, low-speed work activity often includes higher speed travel to and from the work site.

At speeds in excess of 10 mph, a full-face shield helmet can reduce the risk of head injury and should always be kept with the ATV. The full-face shield helmet should bear the American National Standards Institute (ANSI) Z90.1 label, which signifies that it meets national safety standards for design and manufacturing.

If the helmet does not have a face shield, wear ANSI-approved goggles or glasses with hard-coated polycarbonate lenses.

#### *Face shields and goggles*

For some work at slow speeds no head or face protection may be needed but eye protection is recommended. At higher speeds, face or eye protection should always be worn because even an insect could cause a serious eye injury.

The goggles or face shield should carry the ANSI Z87.1 label or equivalent (e.g., VESC 8 or V-8) on the bottom or side of the lens or shield. Gray- or green-tinted shields or goggles are best in bright sunlight, but after sundown only clear lens shields or goggles should be worn.

#### *Footwear*

Quality boots or over-the-ankle work shoes with good heels are a must. The soles and heels should be made of slip-resistant materials rather than leather or neoprene-type material. While motorcycle or ATV-type boots are best, a good quality pair of over-the-ankle, tightly-laced work shoes are adequate for most agricultural operations.

#### *Gloves and clothing*

Gloves and clothing should be determined by the task. Long-sleeved shirts, full-length pants, and well-padded gloves are normally needed. Avoid loose-fitting clothes that could easily catch on a branch or other obstacle.

#### *Pesticide applications*

Pesticide applicators may have an increased exposure when using an ATV outfitted with a pesticide applicator because of the close proximity between applicator, spray nozzle and treated material. Follow label recommendations for personal protective equipment when using pesticides.

### **ATV maintenance**

Routinely check the ATV to make sure it is running properly to reduce risk of injury and the potential to be stranded due to a malfunction.

An ATV has the following key areas that need to be maintained for the machine to work efficiently:

- Tires – Maintain the recommended air pressure in all tires because uneven pressure can cause the ATV to pull to one side. Nuts and bolts should be tightly secured.
- Throttle – Check the throttle to make sure it moves smoothly.
- Brakes – Check the brakes every time before you ride.
- Lights – Check the lights to make sure they are working and wipe away any dirt to maintain optimal visibility.
- Oil and fuel – Examine the ATV for leaks and maintain recommended fluid levels.
- Drive train and chassis – Check for wear, leaks, and loose parts. Replace, tighten, and lubricate parts as needed.

### **Operating an ATV**

Due to their design, ATV's operate differently than most other machines on the farm. Differences in operation are evident in turning, braking, climbing and operating on various terrains.

Turning involves the operator shifting his or her weight for different types of turns. The operator should shift their bodyweight forward and towards the outside of the turn while making a turn.

When turning at higher speed, the operator should lean the upper body towards the inside of the turn while maintaining their weight on the footrest. When braking, gently and evenly apply the brakes.

Overturn incidents can occur on sloped terrains, so it is important to remember how to climb, descend, and operate on sloped areas. When climbing an incline, the operator should shift bodyweight forward while keeping both feet on the footrests.

If the ATV stalls or begins to drift backwards, slowly apply the brakes, stop the machine, dismount, and slowly guide the ATV down off the slope while using the hand brakes. If the ATV stalls or begins to drift backwards, slowly apply the brakes.

When descending a sloped terrain, the operator should shift into a lower gear and drive down hill with feet on the footrest, sitting toward the back. When possible, an ATV should not be driven across steep slopes.

### **Training**

Contact your ATV dealership, DCNR, or [online ATV safety](#) to find training in your areas. These classes will inform riders about safety information and ATV legislation.

### **Resource**

Read additional information and further data about [ATV injuries and fatalities](#). **PD**

*Those with specific questions about complying with health and safety regulations can leave a comment below or [click here](#) to email Douphrate directly.*

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