

# Grove equipment safety

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**T**here are many different types of grove equipment used in the production of citrus. Tractors, mowers, fertilizer spreaders, goats, water trucks, trailers and, more recently, survey platforms all have a role in citrus operations. Over the years this equipment has made agricultural activities less labor intensive and more efficient.

These machines, while increasing production in agriculture, have also made it one of the riskier professions, with 20.3 job-related deaths per 100,000 workers annually. Of those deaths, 36 percent were caused by tractors, while 19 percent were from other types of equipment.

Many of the deaths and injuries involving agricultural equipment could be prevented by safer operations and the use of protective equipment. Owners, managers and employees all play a major role in making agricultural equipment operations safer. Owners have responsibilities for providing a safer work environment and safer equipment. Managers coordinate maintenance designed to ensure the safety and operation of equipment, as well as safety policies and programs. Employees also have a personal responsibility for making the operation of equipment safer.

There are three major elements to making agricultural equipment safer — the operator, the equipment, and the environment. Management's responsibilities include selecting, training, motivating and supervising employees who operate potentially dangerous machinery. Seek employees who have demonstrated dependability with you or other employers and who have good attitudes about safety.

Also, incorporate safety training into your company meetings. Employees must have a good understanding of all instructions and rules, and must understand there are consequences to unsafe practices. Many employers have found that small rewards (meals, gift certificates, cash bonuses) and recognition presented monthly are effective in promoting safety among their employees.

## EMPLOYEE RESPONSIBILITIES

Equipment operators should inspect equipment every day before use. Levels of fluids, fuels and oil should be checked. Tire condition and inflation levels, gauges, lights, brakes and steering mechanisms should be in proper working condition. Any steps or platforms should be clean of debris.

Also of importance is the operator's clothing (no loose ends to get caught in moving parts) and proper personal protective equipment (PPE) such as respirator, eye and ear protection, protective clothing, head gear, gloves and boots. PPE may be uncomfortable — but only for the relatively short amount of time it is used. A permanent disability is uncomfortable for the rest of one's life.

Employees need to pay attention to their own physical and emotional well-being. Are they in a condition to drive? Many things can cause an operator to become unfit for equipment operation: illness, fatigue, anger, medications or other substances that affect alertness, judgment and reaction time. Staying alert and comfortable (as possible) are important aspects of safe equipment operation. Taking short breaks, moving around or stretching, drinking water and eating small amounts of food periodically throughout the day will help you stay alert.

## DEADLY TRACTORS

Tractors are the most dangerous piece of equipment on a farm, with nearly half of tractor related deaths being caused by overturning. Tractor overturns can occur in canals, ditches and washouts. Due to its high center of gravity, tractors are susceptible to turning over on their sides. Tractors should have rollover protective structures (ROPS) and seatbelts to help prevent injury or death of the operator. Wearing your seatbelt when driving a tractor with a ROPS will almost always prevent an injury from occurring.

If using a tractor without ROPS (not recommended), you do not want to wear a seatbelt because if the tractor overturns, no protection is provided. This is the same for extra riders on a tractor — no protection is provided — and the riders are putting themselves in great danger. The only way to prevent a death of an extra rider is to prohibit them from riding at all.

Proper planning and general maintenance can provide a safer environment for everyone. Correcting or focusing on things such as increasing turning radius at ends of rows, controlling vegetation that hides hazards, widening roads or bridges, removing debris or field obstacles and eliminating sharp curves or blind corners can create a safer work area. Other activities that can be potential hazards include driving tractors on public roads, loading/unloading, and towing equipment.

## A PERSONAL TALE

So you don't think it can happen to you? Think again. When I (co-author Atwood) finished school, I started working for a Fortune 500 company that had an excellent safety program. We conducted monthly safety meetings and our quarterly bonus was heavily based on our safety performance. They truly tried to provide a safe environment for their employees. Being a new young employee, I was eager to prove that I was a hard worker. Couple that with the fact that I am a classic type A personality, someone who likes to accomplish goals and does not like delays. I had a young inexperienced boss and I was his first employee that he supervised. He, too, was eager to prove himself.

The company had an old front-end loader that was going to be auctioned off. However my boss decided we could use it at our facility to assist with our harvest. I was in charge of picking up the boxes and transporting them from the field to the loading area and then loading them onto the flatbed truck.

The first thing we discovered with our loader was that the seatbelt did not work. My boss and I decided that we were only going to use the loader for a few days so we would make it work. We used the front-end loader for a day and discovered that the forks on the front of the loader had a hydraulic leak and would slowly drop as they lost pressure. We were busily engaged in harvesting our crop and felt that we did not want the down time, so we would just raise the lever every so often to keep the forks up. This worked for a while until I got into a hurry.

I was rushing in the loader to the next load when suddenly I took a flying header into the glass windshield at approximately 15-plus miles per hour. As I was driving along in the field, the forks were slowly dropping because the hydraulic leak had worsened. Eventually the forks

caught the ground, digging in and propelling the loader forward with the back wheels off the ground. Luckily for everyone involved I just had minor facial wounds. The glass windshield was completely broken, but it managed to keep me from being ejected from the cab.

Thinking back on this scenario, it is hard to believe that I or my boss would use this piece of equipment and put ourselves in this situation. We had the classic “it will not happen to me” attitude. But like many things, it started with a bad decision, followed by one little problem that both I and my boss chose to ignore, followed by another problem, and finally ended up with me in a big hurry. Also, trying to use “old equipment” that was not functioning properly was a bad decision.

When it was discovered that the seat belt was broken, we should have had it fixed or used a different piece of equipment. Ditto the hydraulic leak. Also like many things, being

in a hurry to accomplish the goal did not help the situation.

When it comes to your safety, take the time to do the job right, don't get into too big of a hurry, and don't ignore problems. In fact, fix them immediately!

For more information on safety programs for Florida agriculture, take a look at [www.flagsafe.ufl.edu](http://www.flagsafe.ufl.edu). At the Florida AgSafe Web site, you can find educational information for making the agricultural workplace safer and healthier. This site also contains materials relevant for disasters and emergency situations. Stay informed about current issues in agricultural safety and disaster preparedness and recovery with the monthly e-mail newsletter, “Safety News & Notes.”

A “one-stop” Internet shop for agricultural safety information is the National Ag Safety Database. Included are tractor safety and mowing safety videos that can be viewed in their entirety. Go to [www.cdc.gov/nasd](http://www.cdc.gov/nasd).