



CHAIN SAW HAZARD ALERT

DATA FROM KY OCCUPATIONAL HEALTH NURSES IN AGRICULTURAL
COMMUNITIES (KY OHNAC) PROJECT

January 1998

A review of 74 cases of chain saw injuries to Kentucky farmers revealed that most occurred while the farmers were clearing fence lines. Most of the injuries occurred in the spring, from March through April, and in the fall, from October through November. As for time of day, most happened in the morning, from 8:30 to 10, and in the early afternoon, from 12 to 3.

Described below are two representative incidents, followed by recommendations for prevention of similar injuries.

Case #1: A tree was being felled near a fence line. Falling branches pushed the chain saw into the operator's leg, cutting his kneecap.

RECOMMENDATIONS: (a) *Be aware of your surroundings. Evaluate each tree to be felled. Take into account dead limbs, wind, location of other trees, and ice and snow accumulations on the tree. Take time to remove or reduce these possible hazards. Clear the area of clutter and obstacles such as branches, logs, brush, or any other litter in the area where you plan to make your cuts. Clear a retreat path before you turn on your saw.* (b) *Personal protective equipment (PPE), for example, chaps or ballistic nylon leg protection, hardhats, and heavy boots should always be worn when using chain saws.*

Case #2: A farmer suffered a deep laceration to his right shin after his chain saw kicked back, got hung on a branch, and entangled his clothing.

RECOMMENDATIONS: (a) *Watch out for kickbacks. Always cut at max revs. Be aware of knots in the wood or other objects your saw might hit while you are cutting. Avoid cutting with the upper part of the saw bar, especially the upper quadrant of the bar nose, and use extreme caution if this cannot be avoided.* (b) *Protect your arms and legs. In the past five years 90% of the chain saw-related injuries brought to participating hospitals involved legs, arms and hands being cut when the chain saw got away from the operator. Always wear chaps or heavy pants and long-sleeved shirts when using chain saws. Your clothes should fit well and not be loose.* (c) **NEVER** cut downward, toward your feet. Also, use both hands on the saw and wear heavy gloves. Over 70% of the injuries to upper limbs involved a chain saw operator using his arm or hand inappropriately near the saw. **NEVER** lift the saw over your head, **NEVER** cut above shoulder height, and **DO NOT** over-reach.

For additional information contact the Occupational Injury Prevention Program (OIPP) of the Kentucky Injury Prevention and

Research Center (KIPRC) at 1-800-204-3223 or 606-257-4955. KY OHNAC data are housed at KIPRC (a partnership of the KY Department for Public Health and the University of KY), located at UK Chandler Medical Center, Lexington KY.

1. What to use

Always use a chain saw fitted with safety devices such as chain brake, reduced kickback bar, low kickback chain, antivibration dampers, and chain catcher.

2. Maintenance

Maintain your chain saw regularly.

Keep the chain sharp and correctly tensioned.

When not in use, always carry the saw with the cutter bar facing backwards and the guard in position.

Cover the bar when the chain saw is not in use.

3. Handle chain saws with care

Carefully read the operator's manual. Obey the safety and operating instructions.

Check the chain saw thoroughly before use. Ensure that it is in good condition, the chain sharpened correctly and all safety devices fitted and in working condition.

Always start the chain saw according to the manufacturer's instructions. "Drop starting" is a dangerous practice.

Reduce the danger of kickback; follow the safety instructions and use the correct grip (left hand on front handle bar, right hand on rear handle and throttle trigger; fingers wrapped tightly around handles; handles cradled between thumbs and forefingers). Left arm should remain stiff.

When operating a chain saw it is important to maintain a firm grip. Get a good foothold and keep the saw close to your body. Stand to the left of the cut while bucking.

Always cut at peak revs, to have a better

chance of cutting through any obstruction.

4. Be protected

Wear protective equipment cut-resistant pants or chaps, ear muffs, safety glasses or face shield, helmet, boots and close-fitting clothing.

Never use a chain saw if you are tired, under the influence of alcohol or drugs, or if the weather conditions are not suitable. Chain saw operators need to be alert to avoid accidents.

5. Training

Never allow an inexperienced person to use a chain saw. All chain saw operators should be properly trained.

Less experienced operators should always be closely supervised.

Some operations, such as removing branches from standing trees, removing trees from wires, and cutting trees thicker than the bar guide length, should be undertaken only by a professional.

6. *In general*

Use the correct methods for felling trees.

Do not cut above shoulder height.

Do not stand on the felled tree trunk when limbing.

-Never work under a tree that is lodged against another tree.

-When cutting a springpole or other tree under stress, cut at the bend (from above or below) so it will not fly up when the tension is released.

- Always plan and clear a retreat path before starting to cut.

KIPRC wishes to acknowledge the WORKSAFE AUSTRALIA Division of the National Occupational Health and Safety Commission of Australia for the use of its informational pamphlet on chain saws (see complete document at <http://203.63.129.138/worksafe/pamphlet/c/002088.htm>). Additional tips were provided by the National Institute for Occupational Safety and Health (NIOSH). For additional information visit KIPRC's website (<http://www.kiprc.uky.edu>).