

O. Grounds Maintenance

Prevention of accidents and injuries from tools and machines used in grounds maintenance requires that equipment be chosen for a specific purpose and that it be used and maintained properly. Fuel and chemicals shall be stored and used properly. Workers shall be thoroughly trained and shall wear proper clothing and use protective equipment as required. (See “Personal Protective Equipment”.)

It is important that maintenance workers be able to recognize poisonous vines, shrubs, fruits, and insects. (See “Poison Ivy and Oak”.) They shall avoid contact with poison oak and ivy and permanently destroy all poisonous growths. They shall guard against insects and infections, and scrub hands thoroughly after working outdoors. All cuts and scratches received outdoors shall be treated with proper antiseptic covering. All foreign matter such as glass, metal, and wire shall be removed from the grounds to be maintained. Gloves, sturdy shoes, and appropriate garments for protection shall be worn at all times.

1. Hand Tools

See “Safe Use of Hand and Portable Power Tools.”

2. Gasoline Powered Equipment

The following points shall be followed when handling gasoline:

- a. Gasoline shall never be used for cleaning floors, tools, clothes, or hands. Gasoline is to be used in engines as a source of fuel only.
- b. Gasoline shall only be stored in approved closed containers. Never use an open container, glass, or other breakable container.
- c. Pouring gasoline from one container to another may generate a charge of static electricity. A metal-to-metal contact shall be maintained.
- d. Gasoline spills shall be cleaned up immediately to prevent accumulation of vapors. Do not allow electrical switches to be turned on until the gasoline vapors have dispersed. Electrical devices that start automatically such as cold water fountains may have to be shut off at the main switch if the main switch can be pulled safely.
- e. If gasoline is spilled on a person, the saturated clothing shall be removed immediately and the person kept away from sources of ignition. The affected area of the skin shall be washed with soap and water to avoid a skin rash or irritation. If the eyes are involved, they shall be flushed with water and get the person to a doctor.
- f. Gasoline tanks or equipment parts that are likely to contain gasoline shall be drained or dismantled only out-of-doors or in a well-ventilated area free from sources of ignition.
- g. Smoking shall be allowed in approved areas only. Smoking shall not be allowed in fueling areas, fuel system servicing areas, maintenance areas, bulk fuel delivery areas, etc.
- h. Gasoline shall not be dispensed into a fuel tank while the engine is running or the motor is hot.

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- i. Equipment with fuel in the tank shall not be stored inside a building where vapors could reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
- j. Never run an engine indoors.

3. Lawn Trimmers

- a. Edgers and trimmers shall be treated with the same caution as mowers because they, too, have a heavy metal cutting blade that can throw debris or cut a finger.
- b. Guards shall be kept in place and in working order. Keep the blades sharp. Do not put hands near the working area unless the machine is turned off and unplugged.
- c. Nylon-cord weed trimmers cannot hurt as seriously as metal-blade trimmers-edgers, but getting hit by the line can sting. The operator shall disconnect the power cord when adjusting the cutter cord length or changing the reel, applying the same precautions as with any electrical appliance. Care shall be taken in wet areas and the cord checked periodically for cracks or breaks in the insulation.
- d. Gasoline-powered mowers and tractors shall meet the American National Standard B71.1, "Safety Specifications for Power Lawn Mowers, Lawn and Garden Tractors, and Lawn Tractors". Snow throwers shall meet ANSI B71.3, "Safety Specifications for Snow Throwers".

4. Power Lawn Mowers

- a. Before starting, supervisors shall make sure the operator is well trained in using the mower. If it is the first time the mower will be used that season, the operator shall review the instruction manual. Before starting to mow, the operator shall pick up rocks, glass, tree branches and twigs, and any other objects that could become lethal missiles if thrown out by the mower blade and observe the location of fixed objects such as pipes, lawn sprinkler heads, and curbs that could damage the mower or break off and become missiles. Any wheel height adjustment shall be made prior to starting the mower; disconnect the spark plug wire when cleaning, repairing, or inspecting the mower. Unauthorized persons shall not be allowed to be in the mowing area. The operator shall make a quick inspection for loose nuts and bolts, check the engine oil level (if the mower has a separate oil reservoir), and fill the fuel tank before starting. Using a vented can with a flex spout. The operator shall wear work shoes and safety glasses. A brimmed hat, long pants and a long-sleeved shirt will protect against sunburn.
- b. The operator shall be instructed to mow in daylight or good artificial light and to push the mower forward as much as possible because feet can be injured when pulling a mower backward. When mowing on a slope or terrace, a series of horizontal passes along the incline shall be used. If the operator pushes up the incline, he/she runs the risk of having the mower drift back onto his/her foot. If he pushes down, he/she could lose his footing and fall into the mower.
- c. The mower shall not be used when the grass is wet and slippery. If the grass is damp or high, cut at a slower speed, if possible, and set the cutting height higher than for dry grass; otherwise, the discharge chute may clog up.

- d. Rotary blades can also pick up stones, pieces of wire, nails, or other objects hiding in the grass, and throw them out of the discharge chute at high speeds. Guards shall be in place every time the catcher is not used.
- e. The operator shall shut off the engine and make certain that the blade has stopped completely before taking off the grass catcher to empty it, attempting to free obstructions from the discharge chute, adjusting the cutting height or performing any operation requiring him/her to put his/her hands or feet near the blade.

5. Riding Mowers

Suggested safe practices for riding mowers include the following:

- a. The operator shall be fully instructed in handling riding mowers. He/she shall know the controls, know how to stop the machine quickly, and shall read the owner's manual—especially at the beginning of each mowing season.
- b. The work area shall be cleared of objects that might be picked up and thrown. Fixed objects that might damage the mower shall be identified. All areas cannot be reached by a riding mower; some corners or sharp slopes will have to be mowed by a power mower. When planning landscaping, leave enough space around new plantings for easy mower access and allow for future growth.
- c. Disengage all attachment clutches and shift into neutral before attempting to start the engine (motor). Disengage power to attachments and stop the engine before making any repairs or adjustments. Disengage the power to attachments when transporting them or when they are not in use. All possible precautions shall be taken when leaving the vehicle unattended such as disengaging the power takeoff, lowering the attachments, shifting into neutral, setting the parking brake, stopping the engine, and removing the ignition key.
- d. When mowing, the operator shall stay alert for holes in the terrain and for other hidden hazards. Do not start or stop suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never mow across as the wheelbase is longer than the thread so the unit is more stable that way.
- e. Reduce speed on slopes and on sharp turns to prevent tipping or loss of control. Extreme caution shall be used when changing direction, especially on slopes. Do not back up without looking to make certain it is safe to do so. Watch for traffic when crossing or near roadways. When using attachments, direct discharge of materials away from anything that could be hurt or damaged by it.
- f. Maintain vehicle and attachments in good operating condition and keep safety devices in place. Keep all nuts, bolts, and screws tight, and make sure the equipment is in safe working condition; check especially blade mounting bolts. If the vehicle or its attachments strike a solid object, stop and inspect for damage; the damage shall be repaired before restarting and operating the equipment. The engine governor settings shall not be changes; the engine shall not be over speeded; discharge guards shall always be in the down position.

6. Garden Tractors:

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- a. Garden tractors shall have safeguards for all moving parts to reduce the hazard of contacting belts, chains, pulleys, and gears.
- b. Garden tractors shall have a throttle, gears, and brakes that are accessible and can be operated smoothly with minimum effort.
- c. Safety instructions shall be provided with the garden tractor. There shall be warning labels on the machine itself.
- d. The operator shall read the owner's manual and shall reread its recommendations before each use of the garden tractor.
- e. Never allow children or unauthorized persons to operate the tractor and keep them away from these areas during operation.
- f. The operator shall wear sturdy, rough-soled work shoes, and close-fitting slacks and shirts to avoid entanglement in the moving parts. He/she shall never operate a garden tractor in bare feet, sandals, or sneakers.
- g. The machine shall be turned off and the spark plug wire disconnected when the machine is to be adjusted.
- h. The operator shall always drive up and down the slopes—rather than across when using a garden tractor on a hill for greater stability. (This instruction is different than that for power lawn-mowers.)
- i. Garden tractors shall be started outdoors, not in a garage where carbon monoxide gas can collect.
- j. No smoking shall be allowed near the garden tractor or gasoline storage can.
- k. Unauthorized persons shall be kept away from the machines and the fuel.
- l. All loose or broken parts, especially blades shall be tightened or replaced.
- m. Get expert servicing regularly; it may prevent serious injuries.
- n. Bypass starting of tractors shall not be allowed. (See Section, "Bypass Starting of Tractors.")

7. Pesticides

Insecticides, herbicides, fungicides, disinfectants, rodenticides, and animal repellents are all pesticides. The safe use of pesticides is everyone's responsibility. The user, however, has the major responsibility which begins the day a pesticide is selected and purchased and continues until the empty container has been disposed of properly.

All labels shall include a list of what the product will control, directions on how to apply the pesticide, a warning of potential hazards, and safety measures to follow.

Before using any pesticide poison, read the label carefully. The label states the hazards involved, antidotes, and first aid instructions. Those poisons that have "Danger-Poison" on the label are highly toxic. If inhaled, eaten, or allowed to frequently remain on skin, they could kill. Poisons that have "Warning" on the label are moderately toxic and can be quite hazardous. Poisons that have "Caution" on the label have low toxicity, but could cause harm if the poison is eaten or grossly misused. Label instructions for mixing, handling, and applying shall be followed. "Be Sure—Do Not Guess".

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- a. Application: Any restricted-use pesticide used around a plant shall be applied by a certified handler according to law (Public Law 92.516).
- b. The least toxic pesticide shall be used for the job in order to reduce hazards.
- c. Only enough pesticide to last one season shall be purchased. This cuts down on storage and disposal problems. The following precautions shall be observed:
 - i. Use pesticide poisons only for the purposes stated on the label.
 - ii. Keep pesticide poisons in the original labeled container. Check for leaks or container damage.
 - iii. Mix pesticide poisons carefully (outdoors if possible), keep off skin, and avoid breathing dust or vapors. Use protective clothing and equipment including respirators for toxic chemicals. See “Personal Protective Equipment.”
 - iv. Set aside a special set of mixing tools (measuring spoons and a graduated measuring cup) for use with sprays and dusts only. Keep them with the chemicals.
 - v. Avoid spilling. Set aside a level shelf or bench in a well-ventilated area, preferably outside, for mixing chemicals. A level, uncluttered surface helps avoid spills. If chemicals do spill, wash hands at once with soap and water. Then hose down the mixing area and contact the Office of Campus Safety.
 - vi. Never smoke or eat while spraying or dusting.
 - vii. Someone shall always be “in attendance” when pesticides are being used.
 - viii. During application, stay out of the spray drift. Avoid outside application on a windy day.
 - ix. If pesticide poison gets on skin or clothing, immediately remove clothing and take an all-over bath or shower; be sure to shampoo and use plenty of soap and water. Wash clothing before reuse and contact Campus Safety.
 - x. When finished, wash immediately with soap and water. Do not smoke, eat, or drink without washing first.
 - xi. Never allow unauthorized personnel around treated areas or pesticide poison mixing, storage, and disposal area.
- d. Safe Storage:
 - i. Pesticide poisons shall be stored in a well ventilated, locked area or building. Packages that are likely to be damaged by dampness shall be kept off the floor.
 - ii. Poisons shall be kept in tightly closed, original containers. The label gives information needed in case of accidents. Do not store pesticides in other containers.
 - iii. Do not store clothing, respirators, lunches, cigarettes, or drinks with pesticide poisons. They may pick up poisonous vapors or dusts or soak up spilled poisons.
 - iv. Keep soap and plenty of water handy. Seconds count when washing poisons from the skin.
- e. Disposal: Dispose of pesticides through the LSU Hazardous Waste Program only. See “Hazardous Waste Program.”
- f. Emergency Information:

If an emergency occurs, additional advice and information on antidotes for specific pesticides may be obtained from the Student Health Center or a local hospital. Telephone numbers shall be conspicuously posted.

8. Poison Ivy and Poison Oak

All maintenance workers shall be trained to recognize poison ivy and poison oak.

- a. Poison Ivy grows as a vine up to 50' long or as a small plant. The leaves of this plant always grow in groups of three. The leaves of poison ivy are green in late spring and summer; reddish in the early spring, late summer, and fall.
- b. Poison Oak is most commonly a bush, although it sometimes grows as a vine up to 30' long. The leaves always grow in groups of three and are green in late spring and summer; reddish in early spring, late summer, and fall.
- c. Exposure to poison ivy or oak can be acute (short-term) or chronic (long-term). Acute exposure is received by touching the plant, swallowing parts of the plant, or inhaling smoke of the burning plant. Local signs and symptoms begin 12 hours to 7 days after exposure. Chronic exposure (repeated exposure) increases the severity of the symptoms which could lead to severe poisoning.
- d. Symptoms include itching, swelling, blister formation, oozing, and crusting. Generalized signs and symptoms include fluid accumulation, weakness, malaise, and fever.
- e. Prevention:
 - i. Employees shall be able to recognize these poisonous plants and know how to avoid them.
 - ii. If exposure is possible, heavy clothes and leather gloves shall be used.
 - iii. Upon exposure, the employee shall wash thoroughly with soap and water, and remove all contaminated clothing for washing.

Note: Ingesting of poisonous plants does not help achieve immunity.

- f. Treatment:
- g. Upon exposure, the employee shall wash thoroughly with soap and water and be brought to the Student Health Center for evaluation.