



Tailgate Safety Training for Landscaping and Horticultural Services

Agricultural Safety Program, 590 Woody Hayes Drive, Columbus, OH 43210

Material Handling Devices

Objective: Use tools and equipment effectively and safely to move landscaping and horticultural materials.

How to Use This Module

Using mechanical devices makes handling material easier. But it may increase the risk of an accident. For this module:

- Read the information below on devices and safety tips.
- Ask your supervisor to demonstrate the proper use of each device.
- Practice using devices while your supervisor observes.
- Review the important points.
- Take the True/False quiz to check your learning.

Background

Mechanical devices can be a great help in moving materials, from equipment to containerized plants and bags of mulch. A variety of devices can reduce physical exertion and simplify the job. But those devices also present risks and must be used safely.

For information on other material handling equipment, refer to the Tailgate Safety Training modules *Forklift Safety*, *Tractor Loader Safety*, *Rollovers and Rollover Protective Structures (ROPS)*, and *Safe Use of Hand Pallet Trucks or Electric Carts*.

Hand Trucks

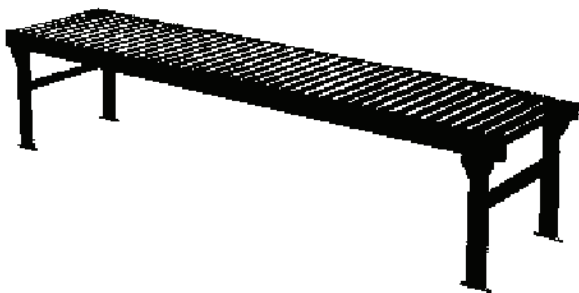
- Wheelbarrows, dolly trucks, and two-wheeled utility trucks are all referred to as hand trucks.
- Two-wheeled hand trucks can lift and transport heavy, bulky objects short distances.
- Work gloves and safety shoes should be worn. Steel-toe shoes are best.
- Hand trucks should be equipped with canvas, leather, or rubber knuckle guards to help prevent hand injuries.
- Check for defects before loading — loose parts, torn wheels, greasy surfaces. Report defects you find.
- Use proper lifting techniques when lifting a load. For more information, see the Tailgate Safety Training module *Preventing Lifting and Over-Exertion Injuries*.
- When loading, the heavy objects should be below the lighter ones, and the load should be kept as low as possible.
- The load should be balanced over the axles.

- Make sure the load does not hang over the edges.
- The hand truck should not be overloaded, and the load should not obstruct your view.
- The operator should push and balance the truck and should always walk forward.
- If the truck has brakes, use them. Don't hold the truck in place with your foot.



Conveyors

- Generally, conveyors used in industry are roller, belt, screw, bucket, chain, overhead trolley, portable, mobile, tow, or assembly types.
- Moving parts should be guarded with metal or wire mesh enclosures or railings.
- Rollers or pulleys at the ends of belt conveyors should be guarded to prevent fingers and hands from being drawn into pinch points.
- A shield, guard, or housing should enclose each end and all other areas at floor level where workers could come in contact with moving parts.
- Avoid riding on conveyors, except those that incorporate platforms and control rooms for operating personnel.
- Conveyors should have conveniently located warning devices and emergency stop controls.
- Turn off power and lock the switch during maintenance.



Cranes and Derricks

- Only trained operators are permitted to run cranes.
- The rated load must be plainly marked on each side of the crane, and the crane must never be overloaded.
- Never work or stand underneath a crane that is moving material.
- If operating, do not swing loads over workers.
- Keep hoisting chains and ropes free from kinks.
- Use a load block hook with a sling — do not wrap ropes around loads. Operators should make sure the sling clears all obstacles.
- Both the operator and the signaler should understand and use standard hand signals for boom cranes. For more information, refer to the Tailgate Training module *Hand Signals for Vehicle Safety*.
- Crane operators should never remove their hands and feet from the controls while a load is suspended.

Review These Important Points

- All employees should be trained before operating machinery.
- Watch for co-workers when completing work tasks.
- Make sure all loads are balanced when moving.
- Keep all screens and safety shields in place.
- Use standard hand signals for communication.

About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

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Answer Key: 1 = T, 2 = T, 3 = F, 4 = T, 5 = T.

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Name _____

True or False?

- | | | |
|--|---|---|
| 1. Use standard hand signals for communication. | T | F |
| 2. Two-wheeled hand trucks are used for transporting heavy and bulky objects short distances. | T | F |
| 3. Brakes aren't necessary on two-wheeled hand trucks; the operator can hold the truck in place with one foot. | T | F |
| 4. Crane operators should never remove their hands and feet from the controls while a load is suspended. | T | F |
| 5. Pay attention to maximum load limits and never overload. | T | F |