ABE138

UF UNIVERSITY of FLORIDA IFAS Extension

Portable Metal Ladders — OSHA Standard 1910.26[1]

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The Impact of Safety on Florida Agriculture

Florida agriculture, including forestry and fishing, made an annual economic impact of $98 billion in 2004. More than 390,000 workers are directly employed in these industries in Florida, and another 380,000 people are employed in activities related to agriculture (Hodges 2006). The state's agricultural enterprises range from large citrus, vegetable and cattle operations to small family-operated farms.

In spite of the popular images of agriculture, it is a highly mechanized, industrial profession with one of the highest injury and death rates among U.S. industries. The last study of death rates in Florida agriculture (Liller 2000) found 240 deaths from 1989 to 1998. In 2005, the Bureau of Labor Statistics (BLS 2005a), reported that death due to injury in agriculture was 31.4 deaths per 100,000 full-time workers, which was the highest rate among all major occupational groups and an increase of 14% over 2004. Also in 2005, the Bureau of Labor Statistics reported 6,100 injuries per 100,000 full-time workers (BLS 2005b).

Safety in Florida agriculture is challenging because:

- the state's agricultural enterprises are diverse,
- safety knowledge among workers varies,
- manual labor is used extensively, and
- the climate creates year-round heat stress.

Therefore, it is vital to assist the public in learning about OSHA documents related to agriculture. More information about the OSHA Standards and agricultural safety is available at the following Web sites:

Florida AgSafe: http://www.flagsafe.ufl.edu

OSHA Regulations:
http://www.osha.gov/comp-links.html

National Agricultural Safety Database:
http://www.cdc.gov/nasd

Overview

This document, a condensation of Section 1910.26 of the Occupational Safety and Health Act (29 CFR), is not intended to be totally inclusive but rather to

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highlight the information and requirements in the complete OSHA standard that owners and managers of all agricultural businesses should understand. Refer to the OSHA Web site given above for the complete standard and for court interpretations of the standard.

Contents of OSHA Standard 1910.26

- Section 1910.26(a) — Requirements
- Section 1910.26(b) — [Reserved]
- Section 1910.26(c) — Care and Maintenance of Ladders

NOTE: Some sections of OSHA standards are labeled "Reserved." This label implies either that information has been deleted from the previous version of the standard or that additions to the standard are anticipated. Because standards often reference other standards, it is important that paragraph numbers remain consistent.

Section 1910.26(a) — Requirements

1910.26(a)(1) — General. Specific design and construction requirements are not part of this section because of the wide variety of metals and design possibilities. However, the design shall be such as to produce a ladder without structural defects or accident hazards such as sharp edges, burrs, etc. The metal selected shall be of sufficient strength to meet the test requirements, and shall be protected against corrosion unless inherently corrosion-resistant.

(i)–(ii) — [Reserved]

(iii) — The spacing of rungs or steps shall be on 12-inch centers.

(v) —- Rungs and steps shall be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping.

1910.26(a)(2) — General Specifications — Straight and Extension Ladders

(i) — The minimum width between side rails of a straight ladder or any section of an extension ladder shall be 12 inches.

(ii) — The length of single ladders or individual sections of ladders shall not exceed 30 feet. Two-section ladders shall not exceed 48 feet in length and ladders over two-sections shall not exceed 60 feet in total length.

(iii) — Based on the nominal length of the ladder, each section of a multisection ladder shall overlap the adjacent section by at least the number of feet stated in Table 1.

Table 1. Required Overlap for Extension Ladders.

Normal length of ladder (feet)	Overlap (feet)
Up to and including 36	3
Over 36, up to and including 48	4
Over 48, up to 60	5

(iv) — Extension ladders shall be equipped with positive stops which will insure the overlap specified in Table 1.

1910.26(a)(3) — General Specifications — Step Ladders

(i)–(ii) — [Reserved]

(iii) — The length of a stepladder is measured by the length of the front rail. To be classified as a standard length ladder, the measured length shall be within plus or minus one-half inch of the specified length. Stepladders shall not exceed 20 feet in length.

(iv)–(vi) — [Reserved]

(vii) — The bottoms of the four rails are to be supplied with insulating non-slip material for the safety of the user.

(viii) — A metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in the open position shall be a component of each stepladder. The spreader shall have all sharp points or edges covered or removed to protect the user.

1910.26(a)(4) — General Specifications — Trestles and Extension Trestle Ladders

(i) — Trestle ladders or extension sections or base sections of extension trestle ladders shall be not more than 20 feet in length.

1910.26(a)(5) — General Specifications — Platform Ladders

(i) — The length of a platform ladder shall not exceed 20 feet. The length of a platform ladder shall be measured along the front rail from the floor to the platform.

Section 1910.26(b) — [Reserved]

Section 1910.26(c) — Care and Maintenance of Ladders

1910.26(c)(1) — General. To get maximum serviceability, safety, and to eliminate unnecessary damage of equipment, good safety practices in the use and care of ladder equipment must be employed by the users.

The following rules and regulations are essential to the life of the equipment and the safety of the user.

1910.26(c)(2) — Care of Ladders

(i)–(iii) — [Reserved]

(iv) — Ladders must be maintained in good, usable condition at all times.

(v) — [Reserved]

(vi) — If a ladder is involved in any of the following, immediate inspection is necessary:

> **(a)** — If ladders tip over, inspect for side rail dents or bends, or excessively dented rungs; check all rung-to-side-rail connections; check hardware connections; check rivets for shear.
> **(b)–(c)** — [Reserved]
> **(d)** — If ladders are exposed to oil and grease, equipment should be cleaned of oil, grease, or slippery materials. This can easily be done with a solvent or steam cleaning.

(vii) — Ladders having defects are to be marked and taken out of service until repaired by either a qualified maintenance department or the manufacturer.

1910.26(c)(3) — Use of Ladders

(i) — A simple rule for setting up a ladder at the proper angle is to place the base a distance from the vertical wall equal to one-fourth the working length of the ladder.

(ii) — Portable ladders are designed as a one-person working ladder based on a 200-pound load.

(iii) — The ladder base section must be placed with a secure footing.

(iv) — The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.

(v) — When ascending or descending, the climber must face the ladder.

(vi) — Ladders must not be tied or fastened together to provide longer sections. They must be equipped with the hardware fittings necessary if the manufacturer endorses extended uses.

(vii) — Ladders should not be used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.

(viii) — See 1910.333(c) for work practices to be used when work is performed on or near electric circuits.

References

Bureau of Labor Statistics. 2005(a). "Workplace Injuries and Illnesses in 2005." Washington, D.C.: United States Department of Labor. *News*, October 19, 2006. USDL 06-1816.

Bureau of Labor Statistics. 2005(b). "Census of Fatal Occupational Injuries Summary, 2005." Washington, D.C.: United States Department of Labor. *News*, August 10, 2006. USDL 06-1364.

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Liller, Karen D., V. Noland, and Carol J. Lehtola. 2000. "An Analysis of Injury Deaths on Florida Farms for Years 1989 through 1998." *Journal of Agricultural Safety and Health* 6 (2): 131–140.