



UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

SS-AGR-128

Maintenance, Care and Cleaning of Application Equipment¹

Vernon V. Vandiver, Jr. and David H. Teem²

The owners' instruction manual, furnished by the sprayer manufacturer, is a good reference and guide to the operation, care, and maintenance of a sprayer or pumping system. All owners should have a manual for their system, should study it thoroughly, and keep it for future reference.

Sprayer pump and nozzle wear, caused by the abrasive particles in the spray material or water, and sprayer deterioration from chemical corrosive action are the most costly maintenance problems affecting sprayers. The wear can be held to a minimum by always using clean water for the spray mixture, using care in selecting less abrasive spray materials, making sure the spray chemicals and water have been well mixed before starting the pump, keeping the proper strainers in place at all times, and never operating the pump without liquid in the tank.

When pumping diluent from a body of water, as during aquatic weed control applications, ensure that no sediment or suspended organic matter is drawn into the system. This could reduce the effectiveness of the treatment or inactivate the herbicide being applied.

Corrosion can be reduced by thoroughly cleaning the pumping system after each period of use. An ordinary field sprayer should never be used for applying liquid fertilizers because these fertilizers are very corrosive to metals other than stainless steel.

Before storage at the end of the season, and after thoroughly cleaning the sprayer, run a few gallons of fuel oil through the sprayer to help prevent rust. Store nozzle tips and all strainers in a can of light machine oil. Gear and piston pumps should be filled with oil. Roller and diaphragm pumps should be flushed with rust inhibitor, and then all openings should be capped.

Herbicide sprayers should be thoroughly washed and cleaned after each use. The sprayer should first be flushed with water, then cleaned with one of the following materials in 50 gals of water by flushing the mixture through the sprayer:

- 1/2 gal of household ammonia (let stand in sprayer overnight),
- 4 lbs trisodium phosphate cleaner,
- 2 1/2 lbs sal soda (sodium carbonate) or

1. This document is SS AGR 128, one of a series of the Department of Agronomy, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Revised: November 1997. Reviewed: May 2002. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.

2. Vernon V. Vandiver, Jr., Associate Professor and Extension Aquatic Weeds Specialist, Fort Lauderdale Research and Education Center, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611; and David H. Teem.

- 2 lbs activated charcoal (leave in sprayer and lines 10 minutes).

Note: To remove traces of herbicides that have an oil base, such as the ester formulations of 2,4-D, rinse the sprayer with kerosene before rinsing it with water and using the cleaners.

As a rule, sprayers used with chemicals to kill weeds should not be used in spraying chemicals for insects or diseases on extremely susceptible crops. The risk of damage to such crops is too great.