Spraying systems should be cleaned out immediately after use to prevent pesticide residues from collecting in the sprayer. Minute quantities of some pesticides may cause injury to non-target sensitive crops. Consider the product site of action, carrier, and additives used in an application to determine the proper cleanout procedure. Pesticide labels contain important information regarding the proper sprayer cleanout procedures, effective cleaning agents, and sensitive crop precautions.

General Cleaning Guidelines
Clean the sprayer immediately following the application of pesticide to avoid the drying or hardening of pesticide residues and potential corrosion and damage to the spraying system. Clean the entire system, not just the tank. In many cases, injury to sensitive crops occurs when switching between crops and traits. Herbicide residues in the sprayer can be re-dissolved by subsequent herbicides, formulation solvents, or spray adjuvants. Fertilizer additives and surfactants can release unwanted herbicide residues from poly tanks, hoses, and strainers.

Plastic or polyethylene tanks and hoses tend to require more extensive cleaning than stainless steel tanks. Screens and strainers should be cleaned or replaced frequently as they can be a major source of contamination. Inspect the inside of hoses for contamination, cracks or wear, and replace if necessary. Don't neglect the outside of the sprayer.

It could transfer pesticide residues to the next field so it should be thoroughly washed immediately following applications. Pay special attention to the following areas that may be missed or difficult to clean:

- Sprayer surfaces or components where buildup might occur due to repeated coats of spray followed by drying.
- Sprayer sumps and pumps.
- Inside the top of the spray tank and around baffles.
- Irregular surfaces inside tanks caused by baffles, plumbing fixtures, agitation units, and others.

Triple Rinse Procedure
After product use, clean all mixing and spray equipment (including tanks, pumps, lines, filters, screens, and nozzles) with a strong detergent or commercial sprayer cleaner. Clean the sprayer in an area that will not result in contamination of water supplies, streams, or crops and is inaccessible to children, pets, and livestock. The best source of information is the pesticide label.

- After spraying, drain the sprayer, boom and lines in an area appropriate for rinsate disposal. Do not allow the spray solution to remain in spray boom lines overnight prior to flushing the system.
- Flush the tank, hoses, boom, and nozzles with clean water. Open boom ends and flush if appropriate.
- Inspect and clean all strainers, screens, and filters.
- Prepare a commercial detergent, sprayer cleaner, or ammonia according to the manufacturer’s directions.
- Take care to wash all parts of the tank including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
- Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
- Repeat the previous steps for 2 additional times to accomplish an effective triple rinse.

(Continued on page 2)
SPRAYING SYSTEM TRIPLE RINSE PROCEDURE

(Continued from page 1)

- Remove nozzles, screens, and strainers and clean separately in the cleaning solution after completing the above procedures. Drain the sump, filter, and lines.
- Rinse the complete system with clean water.
- Dispose of rinsate from all of the steps above in an appropriate manner that complies with all applicable local, state, and federal requirements, laws, and regulations.
- A poorly rinsed boom may cause a V-pattern sensitive crop response versus tank contamination that may result in uniform symptoms across a field (Figure 1).
- Rinsing once, twice, or three times can have varying effects on sensitive crops (Figures 2, 3).

Additional Cleanout Tips
- Sprayer cleanout should be routine. A clean sprayer is much easier to clean than one that has not been cleaned regularly.
- If applicable, clean the spray inductor using the triple rinse procedure.
- Remove all end caps, spray nozzles, screens, filters, and open all valves to ensure complete spray system cleaning (Figure 1).
- When possible, allow commercial spray cleaner and/or detergent solution to set in boom overnight.
- If your sprayer is equipped with an automated self-cleaning system, follow manufacturer guidelines to ensure proper spray system cleanout.
- Consult all product labels for products used in tank mixtures to closely follow cleanout procedures for each product.

Figure 1. Poorly rinsed boom causes V pattern sensitive crop response (left), tank contamination (right).

Figure 2. Sensitive crop response after 2nd rinse.

Figure 3. Sensitive crop response after 3rd rinse.