

## Proper Order for Tank Mixing

Clint Waltz and Alfredo Martinez

For the sake of time, it is common for various pesticides and fertilizers to be tank mixed. Proper mixing of these materials is important to ensure uniform coverage and effective pest control. Improper mixing can cost more money than it saves when the spray tank becomes clogged and requires dismantling of the entire spray rig for a complete cleaning.

Reading the pesticide label can provide information on compatibility of some pesticides, however, it is impossible to test the compatibility of all combinations. Therefore, a simple compatibility test where the mixed materials are combined in a small (1 quart or 1 liter) container at intended rates prior to needed use can give a quick indication of how the materials will behave in a spray tank. Also, when mixing compatible pesticides of different formulations (more on formulations in the next issue of Tech Center) there is a general mixing order that minimizes the likelihood of pesticides inter-reacting with each other. From mixing first to last, mix:

### Wettable Powders • Dispersible Granules • Flowables • Emulsifiable Concentrates • Solutions

- The mixture should be agitated after each addition.

### Reminders for proper tank mixing:

- Familiarize yourself with the adjustments specific to your sprayer, not all sprayers operate the same and are adjusted differently
- Be sure the sprayer is parked on a level surface
- Know the exact tank volume
- Mark the tank volumes where they can easily be read
- Calibrate the sprayer
- Choose a formulation that best meets the need of a particular application
- Read the label and be aware of mixing precautions and personal protection equipment
- Mix only what is needed for that day
- Fill half the tank with clean water, **never** add concentrated chemicals to an empty tank
- Start the agitation before adding any chemicals
- To avoid back-siphoning of chemicals, there should be no direct connection between the water source and the sprayer tank
- Properly measure and add the chemicals to the tank.
- If using different formulations, follow the mixing order above
- Sometimes it is easier to premix the chemicals into a slurry before adding to the tank
- Rinse any mixing containers and pour the rinsate into the tank
- Fill the tank to its final volume, avoid over-filling the tank
- Properly dispose of all empty pesticide containers
- Properly clean-up and dispose of any spilled chemical or pesticide solution
- Apply the pesticide according to labeled directions