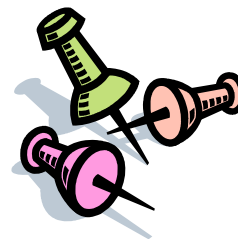




Safety Note

UNIVERSITY OF CALIFORNIA
AGRICULTURE AND NATURAL RESOURCES
ENVIRONMENTAL HEALTH AND SAFETY



Safety Note #95

CO₂ BACKPACK PESTICIDE SPRAYER SAFETY



CO₂ Backpack Sprayer
Photograph Courtesy of R & D Sprayers

Carbon dioxide (CO₂) backpack pesticide sprayers are useful equipment for precisely applying insecticides and herbicides over relatively small areas. Typically, CO₂ backpack pesticide sprayers hold about three gallons of mixed water and chemicals along with the CO₂ cylinder and consequently, a fully loaded sprayer may weigh from 30 to 50 pounds. Safe and effective use of a CO₂ backpack pesticide sprayer is dependent upon accurately applying the proper amount of pesticide. California Code of Regulations Title 8, Section 3203 (7) requires employees to be trained on the equipment they use in the workplace.

Pre-Use Activities

- Thoroughly review and understand information provided in the CO₂ backpack pesticide sprayer operator's manual with particular attention given to descriptions of safety procedures.
- Before using, always inspect the backpack pesticide container and CO₂ cylinder for damage or disrepair and make sure sprayer hoses, regulator, wand, and nozzle(s) are clean and functioning properly.
- If a CO₂ backpack pesticide sprayer fails the pre-use inspection, notify your supervisor and remove the sprayer from service by attaching a red tag that states "DO NOT USE." Complete red tag with appropriate information.

Operating Precautions

- Always wear appropriate personal protection equipment, including eye protection, chemical-resistant gloves, and coveralls and when necessary, chemical-resistant clothing and a respirator.
- Follow instructions on the pesticide label when mixing pesticides for use in a CO₂ backpack sprayer.
- Due to the weight of a loaded CO₂ backpack sprayer, be careful when walking or bending. Look where you are stepping and always bend at the knees.
- Never use flammable liquids, acids, or caustic chemicals such as bleach in a CO₂ backpack sprayer.
- Relieve sprayer tank pressure through the shut-off valve and spray wand before adjusting the pressure regulation valve or control knob.
- Apply pesticides at the rates recommended by the manufacturer.
- Never point the spray wand in the direction of people or animals.
- The pesticide container, hoses, regulator, wand, and nozzle(s) shall be rinsed thoroughly after each use. Rinsate shall be disposed of properly.
- Following use, store the CO₂ backpack pesticide sprayer away from heat sources.

Additional information about safe practices when using or handling compressed gas cylinders is given in Safety Note #18 General Compressed Gas Safety.