



GILA RIVER INDIAN COMMUNITY DEPARTMENT OF ENVIRONMENTAL QUALITY

PESTICIDE
CONTROL OFFICE

Community
Applicator
Certification
Training

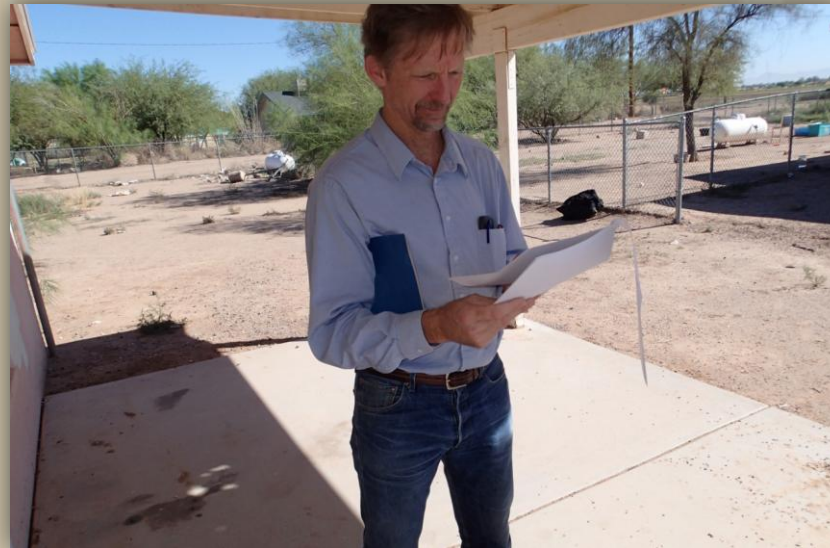


Image Credit: GRIC PCO

Module 9: Planning Pesticide Applications



Planning the Pesticide Application

This Module Will Help You:

- Understand pesticide and adjuvant selection
- Understand tank mixing and loading, and pesticide application procedures
- Understand container and equipment rinsing considerations





Pesticide Selection

Before selecting and applying a pesticide:



- Know the pest
- Know federal, and tribal regulations
- Know how to properly use application equipment
- Read the Label



Pesticide Selection

Site of Application **MUST** be on the Label

For use as a surface, crack and crevice, or spot treatment in, on, and around buildings and structures and their immediate surroundings, and on modes of transport. Permitted areas of use include, but are not limited to, aircraft (cargo and other non-cabin areas only), apartment buildings, boiler rooms, buses, closets, correctional facilities, decks, entries, factories, fencing, floor drains (that lead to sewers), food granaries, food grain mills, food manufacturing, processing and serving establishments; furniture, garages, garbage rooms, greenhouses (non-commercial), hospitals, hotels and motels, houses, industrial buildings, laboratories, livestock/poultry housing, landscape vegetation, locker rooms, machine rooms, mausoleums, mobile homes, mop closets, mulch, nursing homes, offices, patios, pet kennels, porches, railcars, restaurants, storage rooms, schools, sewers (dry), stores, trailers, trees, trucks, utility passages, vessels, vestibules, warehouses, wineries and yards.

For indoor applications, retreat at 21 day intervals or as necessary to maintain control.

Image Credit: GRIC PCO

- Rights-of-way
- Industrial area
- Turf, ornamental planting bed
- Specific crop
- Food-handling establishment, etc.



Pesticide Selection

- Consider personal and environmental safety precautions and prohibitions
- Does label recommend the use of an adjuvant (buffer, surfactant, colorants)?

STEALTH HERBICIDE
EPA REG. NO. 34704-868

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Contains Petroleum Distillate. Harmful if swallowed. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Protective eyewear
- Chemical-resistant gloves made of barrier laminate, butyl rubber, nitrile rubber, or viton
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls:
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. **DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

Endangered Species Protection
If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASABE fine to medium/coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger); wind can be no more than 8 mph; and release height must be 15 feet or less.

To determine whether your county has an endangered species, consult the website <http://www.epa.gov/esp/usa-map.htm>.

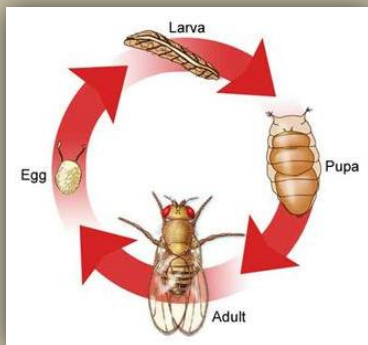
Endangered Species Bulletins may also be obtained from extension offices or state pesticide agencies. If the bulletin is not available for your specific area, check with the appropriate local state agency to determine if known populations of endangered species occur in the area to be treated.

Image Credit: GRIC PCO



Application Considerations

Application Timing



- Plant, insect, disease growth stages
- Soil conditions
- Weather conditions
 - Rain or irrigation
 - Wind speed/direction
 - Cloudy, cool or warm
- Drift warnings, setbacks or no-spray buffers



Equipment Considerations

- Tank size and pump adequate for job
- Type of tank (poly, galvanized steel)
- Nozzle type
 - Formulation, drift reduction, coverage
- Nozzle height/spacing (pattern), alignment
- Pressure





Post-Application Restrictions

- Restrict entry if required

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Entry Restrictions: Keep all unprotected persons out of operating areas or vicinity where there may be drift. Keep people and pets off treated areas until spray solution has dried.

Image Credit: GRIC PCO



Pesticide Incompatibility

Read the Label

- Specific recommendations for tank mixes known to be compatible
- Specific prohibitions for tank mixes known to be incompatible
- No statement, applicator responsibility to jar test for compatibility





Tank Mixes



Image Credit: GRIC PCO

- Thoroughly mix each product before adding the next
 - Preslurry – a little water and product mixed to form paste before adding to tank mix
- Ensure uniform spray mixture at all times
 - Agitation may be required





Diluting Pesticides Correctly





Safe Mixing and Loading



Image Credit: University of Florida, Entomology

- Appropriate mixing and loading area
 - Outdoors
 - Well-ventilated
 - Away from people and animals
 - Protect water sources
 - Location of mix/load site
 - Containment pad
 - Use air gap, check valves or anti-siphon devices (especially with chemigation)
 - Wear additional PPE when you mix and load: gloves, apron, face/eye protection and possibly a respirator



Measuring Pesticide Accurately





Safe Mixing and Loading



Image Credit: Gemplers

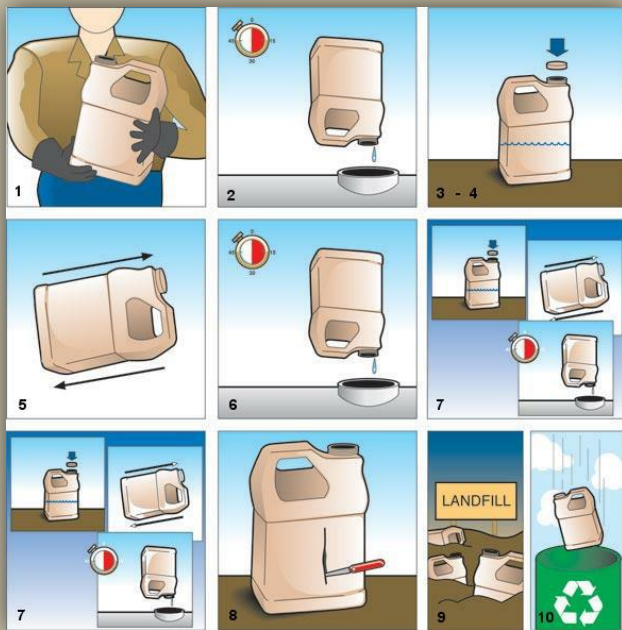
- Clearly mark measuring devices
- Store measuring devices in pesticide storage area
- Carefully open containers
- Close container when not using
- Use accurate scale or measuring device
- Reduce exposure
 - Stay upwind of vapors and dusts
 - Be careful not to splash or spill concentrated product
 - Pour below eye level
- Never leave sprayer or containers unattended



Cleaning and Disposal of Pesticide Containers

Rinsable Containers

- Triple-Rinse containers immediately
 - Completely empty pesticide concentrate
 - Fill container about 20% full with water, replace lid, shake container
 - Drain and rinse water into spray tank
 - Repeat twice





Cleaning and Disposal of Pesticide Containers

Non-Rinsable Containers



Image Credit: GRIC PCO

- Empty as best possible
- Return if appropriate
- Dispose of in normal refuse if not recyclable or returnable; also render unusable



Application Procedures

- 1) Personal Protective Equipment
- 2) Clear all people, pets, toys and other items from application area
- 3) Make sure pesticide contacts target area



Image Credit: MyBooksMyLife.com



Application Procedures



Image Credit: GRIC PCO

- 4) Apply pesticide evenly
- 5) Make sure pesticide application looks appropriate
- 6) Check hoses, valves, nozzles, for leaks during application
- 7) Turn equipment off when you pause during the application
- 8) Make sure all post-application requirements are met
- 9) Soil incorporation
- 10) Label required posting
- 11) Reentry and restricted entry intervals
- 12) Grazing and pre-harvest intervals



After Mixing, Loading and Application

- Clean application equipment when done
- Rinse empty spray tank – apply to site
 - Carry rinse water with you
 - Will not wash pesticide off
 - Once tank clean, decontaminate next
- Rinse empty spray tank – collect rinsate
 - Collect and hold rinsate for use in subsequent spray batch, if similar product is to be mixed later
 - Do not reuse rinsate containing cleaning agents
- Unusable material most likely considered hazardous waste

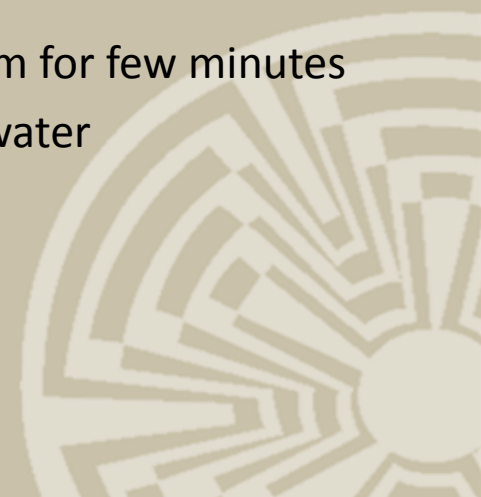


After Mixing, Loading and Application



Image Credit: WDA

- Decontaminate tank if necessary
 - Water-detergent solution
 - Label-prescribed decon instructions and materials
- Circulate in entire system for few minutes
- Flush twice with clean water





Cleaning Up





After Mixing, Loading and Application

- Personal Cleanup
 - Remove contaminated clothing
 - Shower immediately after the application
 - Properly wash contaminated clothing
 - Dispose of heavily contaminated clothing as household hazardous waste





Acknowledgements

Adapted with permission from the Washington State University
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