

Ornamental & Turf Management

Test Plan Development

I. Pest Identification

- a. Bi-annuals
- b. Annuals
- c. Perennials
- d. Desirable vs. Pest (selective control)
- e. Monocot
- f. Dicot
- g. Insect – growth stage, appropriate time for control (thresholds)
- h. Disease identification
- i. Rodent
- j. Scouting/ Monitoring/ Trapping for Pests
- k. Growth Regulators

Pests

- l. Ants
 1. Southern fire ant
 2. Red Imported fire ant (Qualified Applicator)
 3. Harvester ant
- m. Cockroaches
 1. Oriental
 2. Turkestan
- n. Beetles
 1. Flat-head borer
 2. Palo Verde
 3. Bark Beetles
 4. White Grubs
 5. Bill Bugs
 6. Long-Horned Beetles
 7. Agave Weevils
 8. Yuccas
- o. Pests of Public Health concern
 1. Mosquitoes
 2. Ticks
 3. Mites
 4. Chiggers
- p. Scorpions
 1. Bark scorpion
- q. Wasps
 1. Yellow-jacket-2 + 1 invasive
 2. Paper wasps
- r. Other invaders
 1. Aphids
 2. Whiteflies

3. Psyllids
 4. Stink bugs
 5. Mealy bugs
 6. False chinch bugs
 7. Ground Pearl
 8. Armyworm, Cutworm, Webworm
 9. Skeletonizers
- s. Vertebrates
1. Gophers
 2. Ground Squirrels
 - 3.
- t. Crickets
1. Mole Crickets
 2. Camel Crickets
 3. Field Crickets

Weeds

- a. Clovers
1. Black medic
 2. Bur clover
 3. Annual sweet clover
- b. Mustards
1. London rocket
 2. Mustards (sahara, black, wild radish)
 3. Shepherds purse
 4. Swine cress
- c. Composites
1. Groundsel
 2. Sow thistle
 3. Prickly lettuce
- d. Other
1. Cheese weed
 2. Red stem filaree
 3. Chickweed
 4. Knotweed
 5. Dodder
- e. Summer annual broadleaves
1. Spurge
 2. Horseweed
 3. Pigweed
 4. Common purslane
 5. Russian thistle
 6. Puncturevine
 7. Toadflax
 8. Thistles
 9. Globe Chamomile
 10. Hairy Fleabane

11. Camphorweed
- f. Winter annual grass weeds
 1. Hare Barley
 2. Red brome
- g. Summer annual grass weeds
 1. Goosegrass
 2. Southwestern cupgrass
 3. Crabgrasses
 4. Sandbur
 5. Bermudagrass
- h. Perennial weeds
 1. Purple Nutsedge
 2. Yellow Nutsedge
 3. Kyllinga
 4. Silverleaf nightshade
 5. Johnsongrass
 6. Rescuegrass
 7. Dallisgrass
 8. Buffelgrass
 9. Fountaingrass
 10. Camelthorn
 11. Hogpotato

II. Read and Comprehend Label and Labeling

- a. Safety Issues
 1. Spray Drift
 2. Run Off
 3. Wildlife
 4. Surface Waters (lakes, rivers, washes)
 5. Groundwater Protection List – A.I.
- b. Worker Safety – PPE
- c. Public Safety
 1. Re-entry
 2. Workers
 3. Children
 4. Pets
- d. Calculate chemicals
 1. Application Rates
 - i. Site
 - ii. Pests
- e. Types of Applications
 1. Pre-emergent
 2. Post-emergent
 - i. Spray to Wet
 - ii. Broadcast

- iii. Spot spray
 - iv. Spray to run-off
 - 3. Injection
 - i. Stump treatment
 - 4. Drench
 - 5. Baits
 - 6. Gases
 - 7. Traps
 - 8. Use of Adjuvants
- f. Tank Mixes
- g. Growth Regulators

III. Planning and Implementing a Vegetation /Pest Management Plan

- a. Appropriate Product formulations
- b. Secondary poisoning
- c. Application Timing
 - 1. Weather
 - 2. Life Stage
- d. Pesticide Resistance Issues
- e. Monitoring after Application

IV. Laws and Rules

- a. Ground water protection reporting
 - 1. A.A.C. R3-8-505
 - i. Reporting Requirements
 - ii. Where to find the list (QA)
 - 2. QA Responsibilities
 - 3. School Posting

V. Equipment Types, Uses, Maintenance and Calibration

- a. Nozzles
- b. Pumps
- c. Hoses
- d. Hand Sprayers
- e. Backpack Sprayers
- f. Broadcast Sprayers
- g. Granular Spreaders

Resources – *Category 3b: Turf Management (Purdue Extension); Rights-of-Way Management (Washington State University Extension); Weeds of California and other Western States Vol. 1 & 2 (University of California); Truman’s Scientific Guide to Pest Management Operations Seventh Edition; [Handbook on Pests of Community Environments in the Desert Southwest United States](#); [UC IPM](#); [Arizona Revised Statute Title \(A.R.S.\) 3 Chapter 20](#); [Arizona Administrative Code \(A.A.C.\) Title 3 Chapter 8](#); and [National Pesticide Applicator Certification Core Manual](#)*