ATHEA LABORATORIES, INC.

Grounds Maintenance

Herbicides

SERVICE. SPEED. FOCUSED INNOVATION.

Factors in successFul application

- Results Desired
- Time of Year
- Climatic Conditions
- Soil Types
- Type of Herbicide Used
- Use of Surfactants

Herbicide types

- Selective: Effective against only certain types of plants

- Non-Selective: Kills most plants
  - Contact Herbicide: Kills only the portions of the plant in which it comes in contact. Sometimes called a defoliant. Example: Diquat
  - Systemic Herbicide: Absorbed by the plant and are translocated from the leaves, to the stem, to the root. Example: Glyphosate

Herbicide types

- Foliar: Absorbed through the leaves or foliage of the plant
  - Examples: 2,4-D, Glyphosate, Diquat

- Basal: Absorbed through the roots of the plant, and typically work slower
  - Examples: Prometon, Bromacil

VOC Restrictions

- Because of V.O.C. (Volatile Organic Compounds) restrictions, certain herbicides may not be sold into certain states

- #315 Non-Selective #1, #320 Barren, #322 Turf King cannot be sold into: CA, CT, DE, IL, ME, MD, MA, MI, NH, NJ, NY, OH, PA, VA (10 counties around DC), DC, IN

- VOC-compliant products: #314 Vacate, #318 Banish

Selective herbicide

#363: triple threat

- 2,4-D, MCPP, 2,4-DP (~10% active) provide synergistic effect of three herbicides
- Extremely effective against broadleaf weeds
- Foliar and basil absorbed
- Water-dilutable concentrate (~1:50)
- Slight residual activity for 2,4-D (1 – 4 weeks) for hard-to-kill weeds
- Increased effectiveness with #395 Surfactant

Selective herbicide
#8363: triple threat

- Aerosol version of #363 Triple Threat
- Ready-to-Use broadleaf killer
- Pinpoint spray to hit target weeds
- Foams to show application points
- Inverted cap for ease-of-use

Non-selective

#145: eliminator

- Water-based herbicide kills almost everything it contacts
- Excellent aquatic weed control
- Contains 1.85% Diquat
- 1:8 concentrate, dilutable with water
- Results seen in a few days
- Foliar absorbed, no residual, does not prevent re-growth
- Increased effectiveness with #395 Surfactant

Non-selective

#150: zap it / #155: Zap it ultimate

- #150: Zap It ready-to-use, 1% Glyphosate
- #155: Zap It Ultimate, 18% Glyphosate (3 – 6 oz: gallon water)

- Water-based systemic herbicide kills entire plant

- No residual activity, deactivates upon contact with soil

- Foliar absorbed

- Increased effectiveness with #395 Surfactant

Non-Selective

#316: Weed easy

- Granular soil sterilant. Requires water or rain to carry to the soil
- 4% Bromacil sterilizes the soil
- Slow kill: 10 – 14 days
- Residual activity prevents re-growth for up to one year
- Has leaching characteristics

Non-selective

#320: Barren

- Ready-to-use, oil-based soil sterilant
- 1.09% 2,4-D for quick knockdown
- .98% Bromacil sterilizes the soil
- Systemic action, foliar and basil absorbed
- Residual activity prevents re-growth for up to one year
- Non-VOC compliant. Recommend #314 Vacate

Non-selective

#8320: barren aerosol®

- Aerosol version of #320 Barren
- VOC complaint
- Ready-to-Use
- Pinpoint spray to hit target weeds
- Inverted cap for ease-of-use; applies black

Non-selective

#314: vacate

- VOC-compliant alternative to #320 Barren
- Ready-to-Use, oil-based soil sterilant
- 1.1% 2,4-D for quick knockdown
- .61% Bromacil sterilizes the soil
- Systemic action, foliar and basil absorbed
- Residual activity prevents re-growth for up to one year

Non-selective

#322: turF king

- Liquid, oil-based soil sterilant
- 1:10 concentrate, dilutable with water or oil. Liquid required to move into the root zone
- 3.73% Prometon
- Primarily basil absorbed
- Residual activity prevents re-growth up to one year
- Increased effectiveness with #395 Surfactant
- Non-VOC compliant. Recommend #318 Banish

Non-selective

#318: Banish

- VOC-compliant alternative to #322 Turf King
- Liquid, cost-effective water-based soil sterilant
- 1:10 concentrate, dilutable with water
- 1.2% Lithium Salt of Bromacil
- Residual activity prevents re-growth up to one year
- Low odor, non-staining formula
- Absorbed by the root for a slower kill (up to 14 days)
- Lower dosage rate for bare areas, higher rate heavy weed population

application hints

- Always follow label directions, more is never better
- When applying soil sterilants, ensure enough is applied to allow ground penetration
- When applying soil sterilants, ensure ground is clear enough to allow ground penetration
- Use a dedicated sprayer for each herbicide type
- Optimal application time is when weeds are young and / or actively growing; active weeds will draw the herbicide into the root. Weeds can go into a dormant “hibernation” state when stressed

Selection guide