Solution
sheet

Reducing off-target issues

/// The problem

When applied correctly, non-crop herbicides are useful and necessary tools to manage unwanted vegetation that can lead to safety, financial, and economic losses. However when applied incorrectly, non-crop herbicides have the potential to cause off-target injury to desirable vegetation. Training and education about proper herbicide performance can help eliminate these risks. This results in economic, aesthetic and environmental benefits to the treatment site.

/// The solution

Use the following checklist as a guide before making applications.
It will help you develop a low-risk and high-benefit herbicide program.

Chemical selection

// Understand the herbicide solubility, mobility, persistence, and volatility properties.

// Know the chemical sensitivity of adjacent vegetation, crops and ornamentals.

// Match the correct herbicide, rate and timing to the target vegetation.

// Research the site history and presence of resistant weeds in the area.

// Tank-mix herbicides with multiple modes of action on the target when possible. Repeated use of the same herbicide can result in resistance.

// Treat weeds during optimum growth stage of life cycle for best activity.

// Evaluate performance at the end of the season to consider any program upgrades needed.

/// The solution (continued)

Application accuracy

// Select the proper equipment and licensed personnel for the spray job.
// Use the proper nozzle type for accurate herbicide placement. Calibrate nozzles periodically for spray output accuracy.
// To reduce spray drift:
- Match spray pressure, nozzles and driving speed to obtain good weed coverage while minimizing the production of fines (small droplets most prone to drift) that can lead to drift
- Apply with spray boom or nozzle height as low as possible
- Use a drift control agent as recommended by product labeling

// Use caution when making treatments next to desirable vegetation.
// Maintain detailed spray records.
// Please be aware:
- Tree or plant roots may extend or grow into the treatment area
- Slopes will impact fixed nozzle application rates
- Draining or flushing spray equipment near or on desirable vegetation may result in injury or loss of desirable vegetation

Target area stability

// Sites disturbed by mechanical means or vehicle traffic may lead to herbicide inactivity or movement to off-target areas.
// Know the soil texture or road ballast composition as it relates to wind or water erosion potential, as well as herbicide leaching potential.
// Treat asphalt or concrete surfaces only if specifically directed by the product labeling.

Environmental conditions

// High wind, high temperatures and low humidity may increase potential off-target drift.
// Saturated soils, frozen soils, soil-impedance layers, sloped areas or heavy rainfall may increase potential off-target movement.
// Be cautious of passing vehicle wind shear when spraying (i.e. large trucks).
// Avoid applications to:
- Powdery, dry soils and light, sandy soils when there is little likelihood of rainfall soon after treatment
- Weeds hardened off by cold or hot weather or drought conditions

// Understand local weather patterns to make a proper timing of the herbicide treatment.
// Do not apply during a temperature inversion.
// Know the location of water bodies prior to making application. Avoid applications directly to the water's surface.
// Observe label buffers from water and other sensitive areas.
// A heavy rain shower may cause product to dissolve and be carried to the lowest point in or near the treatment area.
// Movement of any product during a heavy rainfall is possible.
// Be aware of areas with shallow ground water tables and select herbicides accordingly.

For more information about effective vegetation management, contact your Bayer representative or visit vm.bayer.us.