



Dixon/Solano RCD Water Quality Coalition
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Pyrethroid

Active Ingredients: bifenthrin, cyfluthrin, cypermethrin, esfenvalerate, fenpropathrin, gamma-cyhalothrin, lambda-cyhalothrin, permethrin

Common Products Names: Adjourn, Ammo, Asana XL, Athena, Baythroid, Bifenture, Bolton, Brigade, Capture, Cobalt, Danitol, Decathlon, Discus, Fanfare, Hero, Karate, Lambda-Cy, Lambdastar, Lamcap, Leverage, Mustang, Paradigm, Perm-Up, Pounce, Province, S-Fenvalostar, Scimitar, Silencer, Sniper, Stiletto, Tame Warrior

Movement: High tendency to attach to fine soil particles. Moving with sediment in irrigation tailwater or stormwater and/or through application drift.

Field Dissipation Half Life: Half-life in soils ranges from 1-2 months. In aquatic sediment, months to years.

Aquatic Toxicity: Very high to Extremely High

Critical Use Activities: Spring and/or summer applications to various crops (including orchards, tomatoes, beans, peppers, alfalfa, corn, and sudangrass)

RECOMMENDED PRACTICES**

1) Consider Alternative Products & Integrated Pest Management Strategies (see UCCE Alternatives Products visit: <https://ipm.ucanr.edu/>)

2) Where agricultural uses continue, implement one or more of the following:

Use extreme caution during applications around **field edges**. Eliminate drift and overspray, especially near ditches (supply and drainage).

Pay special attention to buffer zone & vegetated buffer requirements on label following **SPRAY DRIFT PRECAUTIONS**.

Use irrigation management practices to reduce and/or slow tailwater runoff:

- Drip or micro irrigation.
- Monitor soil moisture levels and evapotranspiration rates in irrigation management.

Avoid applications of pyrethroids just prior to a rainfall event or irrigation to minimize the potential for runoff.

Sediment Retention (especially fines) with the following methods suggested:

- Direct post-treatment runoff through filter strip, alfalfa field or vegetated drainage ditch.
- Temporarily impound post-treatment runoff in a sediment basin (although basin sizes necessary to capture fine sediments may be impractical depending on site characteristics); sediment basin effectiveness can be increased by directing the basins outflow through a vegetative filter.
- Recirculate runoff through a tailwater return system.
- Reduce and/or delay the release of tailwater after application to allow product to degrade.

Install irrigation socks where gated pipes are used to minimize soil erosion. For furrow irrigated crops, apply water-based Polyacrylamides (PAMs), after the first pyrethroid treatment post-cultivation.

**Reminder to share this information with the applicators in your operation.

3) Aerial Pesticide Application

- Use ground spray, if possible
- Supply a current map to the applicator of targeted areas to be sprayed with sensitive areas like waterways, clearly marked
- Never spray on days with wind over 6 mph
- Never spray in the direction of a waterway

Best Practices from our Current Management Plan for Sediment Toxicity**

- Using alternative pest control materials (i.e., using non-pyrethroid pesticides);
- Reducing the number of pesticides applied by monitoring pest and beneficial populations to determine the need for pesticides and the best timing for maximum control;
- Reducing the number of pesticides applied with spray buffers at field edges and near ditches;
- Reducing drift by regular calibration of sprayers for pesticide applications;
- Reducing drift by using electrostatic sprayer equipment;
- Reducing drift by using effective drift control mechanisms;
- Maximizing time between application and planned irrigation runoff and/or predicted storm runoff events in order to reduce loss of applied pesticides from foliage, transport on soils, and transport of pesticides bound to particles in tailwater;
- Changing to more efficient application methods (e.g., ground vs. aerial applications and/or equipment that provides more precise applications);
- Installation of vegetated filters between application areas and ditches and/or allowing vegetation to grow in drainage ditches to reduce movement of pesticides bound to soil particles and contamination from aerial overspray (Note: vegetated BMPs may be less effective for very fine-textured clay soils);
- Reducing irrigation tailwater through conversion from flood or furrow irrigation to buried drip, sprinkle micro-irrigation where applicable;
- Reducing irrigation tailwater with tailwater return systems;
- Reducing or delaying irrigation tailwater through irrigation water management;
- Sediment and erosion control practices.

Visit our website: <https://www.dixonrcd.org/bmps-for-pesticides>