



Best Management Practices (BMPs) for Vineyards Adjacent to Monarch and Pollinator Habitat Projects

A product of the Napa County Monarch Working Group

Monarch butterflies can be present in Napa County from mid-March through late-October, when vineyards are actively managed. Butterflies and native pollinators can be exposed to harmful pesticides during spraying and indirectly through contact with or ingestion of sprayed plants. Monarch butterflies are most vulnerable during the egg-chrysalis phase when they aren't mobile.

BMPs for Vineyards

Use Integrated Pest Management practices such as prevention and monitoring. If pesticides must be used, choose the least toxic pesticide and treat only the necessary areas.

Avoid neonicotinoids or other systemic insecticides, including coated seeds. These chemicals are absorbed by the plant which makes the plant itself toxic. Neonicotinoids include: acetamiprid, clothianidin, dinotefuran, imidacloprid, nitenpyram, thiacloprid, and thiamethoxam.

If neonicotinoids must be used on your property or might be used on an adjacent property, maintain a buffer of at least 125 ft between areas of neonicotinoid use and habitat areas.

Maintain a buffer of at least 40 ft between areas of ground-based pesticide (including sulphur) application and habitat areas, and 60 ft between air blast spray areas and habitat areas.

Use vegetative buffers (drift fences) when space is limited, and the spatial buffer cannot be achieved. These are densely planted, small-needled evergreen species which grow above spray release height.

Always follow chemical label instructions. Avoid drift by monitoring wind speed with a handheld anemometer or weather station when spraying. Some chemicals also specify monitoring temperature inversion.

Ensure sprayer and nozzle technology used in the vineyard is up to date and designed to minimize drift. Check system for leaks as small leaks under pressure can create fine droplets more likely to drift.

Screen all fungicides, herbicides, and insecticides (including biological and organic) for pollinator risk to avoid harmful applications. Keep in mind that mixes of chemicals can be more harmful than each individually. Use Bee Precaution to determine risk.

Don't use herbicides on blooming flowers. Time application during young plant phases or use non-chemical alternatives.

Incorporate these practices into employee trainings. Education of landowners, managers, and crews is essential. Normalize conservation culture.



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