

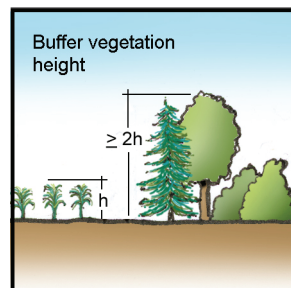
### 5.3 Buffers and spray drift

Buffers can help protect sensitive non-target areas from chemical spray drift. The buffer design is dependent on many variables including spray method, wind, chemical type, and the type of sensitive non-target.

The adjacent graphs summarize recommendations for buffer widths based on spray method and the type of sensitive non-target to be protected. Below are general design considerations.

#### Key design considerations

- Use vegetation with fine or needle-like leaves. Broadleaf plants capture less drift but are good for reducing wind.
- Use vegetation tolerant of the chemical being applied.
- Provide a permeable barrier (40 to 50 percent density) to allow air passage. Several rows of vegetation are better than one dense row.
- Buffer should be at least two times taller than the crop.
- Use a mixture of plant forms to ensure no gaps.
- Locate to intercept the prevailing winds and as close as possible to the spray zone.



The black bar denotes the suggested minimum recommended width while the gray bar indicates the upper end of the recommended widths based on current research. This summary should only serve as a starting point for design.

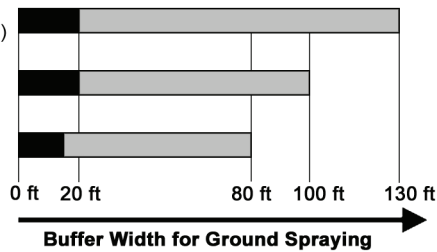


**Sensitive Non-Target**

**Vegetation**  
(e.g., seedlings, native veg.)

**Aquatic**  
(e.g., wetland, fish)

**Invertebrates**  
(e.g., bees, butterflies)

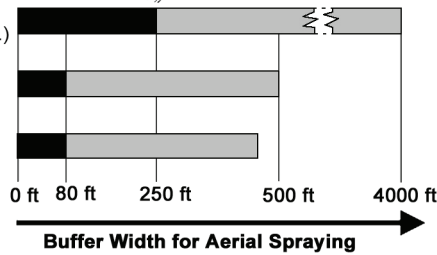




**Sensitive Non-Target**

**Vegetation**  
(e.g., seedlings, native veg.)

**Aquatic**  
(e.g., wetland, fish)

**Invertebrates**  
(e.g., bees, butterflies)



Minimum recommended width   
Upper end of recommended width 

Due to the variability of chemical toxicity, these guidelines need to be used in conjunction with specific management recommendations for the particular chemical in use. Computer models are also available to help calculate spray drift potential and buffer zones.

Buffers should not be a substitute for other safety measures. Additional best management practices for chemical spraying need to be used in conjunction with buffers.

### 5.3 References

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