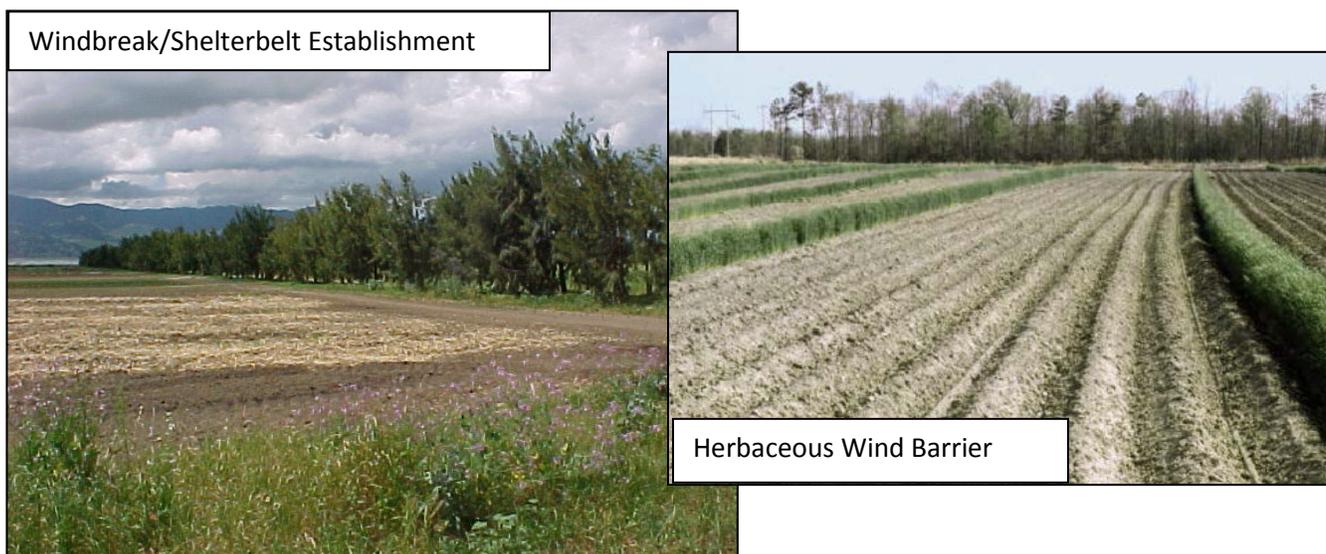


# BALANCING FOOD SAFETY AND SUSTAINABILITY

## Opportunities for Co-management – Windbreaks and Wind Barriers

*This is one of a series of resource sheets for **food safety auditors** that describe conservation practices commonly used in agriculture's production environment.*



Images of Windbreaks<sup>1</sup> and Wind Barriers<sup>2</sup> in the production environment

### This information will help you to

Recognize Windbreaks and Wind Barriers in the agricultural environment.

Understand the purposes Windbreaks and Wind Barriers serve in the agricultural environment.

Recognize the language growers may use to explain why these practices are important in their production environment.

Understand when audit standards may consider these practices as addressing farming impacts on the environment and biodiversity and/or to as potential contributors food safety risk.

Windbreaks are generally planted adjacent to but are not part of the production field. Wind barriers may be included in the production field.

<sup>1</sup> This practice is currently listed as [Windbreaks/Shelterbelt Establishment #380](#) by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Some states may include additional guidance; consult your local NRCS field office.

<sup>2</sup> This practice is currently listed as [Herbaceous Wind Barrier #603](#) by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Some states may include additional guidance; consult your local NRCS field office.

**Windbreaks** and other wind barriers are generally established to protect or shelter nearby leeward areas from troublesome winds. Plantings of single or multiple rows of trees or shrubs help to reduce [soil erosion](#) from wind, protect growing crops and forage, and improve irrigation efficiency. Windbreaks also protect structures and livestock, provide wildlife habitat, control views and lessen noise. The term shelterbelts is also used to describe these plantings in some areas of the country.

**Herbaceous wind barriers** are established in narrow strips across the prevailing wind direction to trap wind-borne sediment and provide protection downwind of the strips. Each strip can be composed of one or more rows of plants or planted around the perimeter of the field. Plants can be annual or perennial.

Advantages <sup>1</sup>	Disadvantages
<b>Characteristics shared by practices</b>	
<ul style="list-style-type: none"> <li>• Reduces wind damage to crop</li> <li>• Reduces soil erosion by wind</li> <li>• Reduces transport of wind-borne contaminants</li> <li>• Enhances wildlife habitat, especially when native species are used</li> <li>• May provide habitat for beneficial insect species</li> </ul>	<ul style="list-style-type: none"> <li>• May shade adjacent crop</li> <li>• May require maintenance, including irrigation, weed control, fertilization, and/or protection from livestock during establishment</li> <li>• May provide habitat for rodent or bird pests</li> </ul>
<b>Windbreaks/Shelterbelt</b>	
<ul style="list-style-type: none"> <li>• Provides a living visual and noise screen</li> <li>• May improve sprinkler irrigation efficiency</li> <li>• <a href="#">Control PM10 emissions</a></li> </ul>	<ul style="list-style-type: none"> <li>• May shade adjacent crop</li> <li>• Can create frost pockets if planted at the base of a slope</li> </ul>
<b>Herbaceous Wind Barriers</b>	
<ul style="list-style-type: none"> <li>• See shared characteristics</li> </ul>	

<sup>1</sup>From [Farm Water Quality Management Practice Sheets](#) Windbreaks #380; Herbaceous Wind Barrier #603

**In some audit standards** these practices may help producers to demonstrate knowledge of the impacts of farming on the environment including control of fugitive dust, and on biodiversity. They may trigger concerns about animal activity, fecal contamination, or proximity to habitat for wildlife.

## Scenarios

Cropped area adjacent to a Windbreak is included in routine and pre-harvest monitoring for evidence of fecal contamination and/or animal activity.

## Additional Resources

[Balancing Food Safety and Sustainability: Opportunities for Co-management, 2012](#)

*Additional resources on co-management of food safety and sustainability may be found at on the UC Food Safety Website under the [Pre- and Post-Harvest Produce](#) link. You can also contact Mary Bianchi, UC Cooperative Extension Emeritus Farm Advisor in San Luis Obispo County at [mlbianchi@ucanr.edu](mailto:mlbianchi@ucanr.edu).*