



#### 5.4 Weed control with buffers

Buffers are usually not a source of weeds and can be used for weed control. Buffers can trap water- and wind-dispersed weed seeds, reducing the area required for weed management. The concentration of weed seeds aids in seed predation by animals. Dense groundcover in a buffer can reduce weed germination.

#### 5.4 References

- Asteraki, E.J.; Hart, B.J.; Ings, T.C.; Manley, W.J. 2004. Factors influencing the plant and invertebrate diversity of arable field margins. *Agriculture, Ecosystems and Environment*. 102: 219-231.
- Damschen, E.I.; Haddad, N.M.; Orrock, J.L. [and others]. 2006. Corridors increase plant species richness at large scales. *Science*. 313: 1284-1286.
- Devlaeminck, R.; Bossuyt, B.; Hermy, M. 2005. Seed dispersal from a forest into adjacent cropland. *Agriculture, Ecosystems and Environment*. 107: 57-64.
- Gelbard, J.L.; Belnap, J. 2003. Roads as conduits for exotic plant invasions in a semiarid landscape. *Conservation Biology*. 17: 420-432.
- Harvey, C.A. 2000. Colonization of agricultural windbreaks by forest trees: effects of connectivity and remnant trees. *Ecological Applications*. 10: 1762-1773.
- Holmes, R.J.; Froud-Williams, R.J. 2005. Post-dispersal weed seed predation by avian and non-avian predators. *Agriculture, Ecosystems and Environment*. 105: 23-27.

Landis, D.A.; Menalled, F.D.; Costamagna, A.C.; Wilkinson, T.K. 2005. Manipulating plant resources to enhance beneficial arthropods in agricultural landscapes. *Weed Science*. 53: 902-908.

Marino, P.C.; Gross, K.L.; Landis, D.A. 1997. Weed seed loss due to predation in Michigan maize fields. *Agriculture, Ecosystems and Environment*. 66: 189-197.

Marino, P.C.; Westerman, P.R.; Pinkert, C.; van der Werf, W. 2005. Influence of seed density and aggregation on post-dispersal weed seed predation in cereal fields. *Agriculture, Ecosystems and Environment*. 106: 17-25.

Marshall, E.J.P. 1989. Distribution patterns of plants associated with arable field edges. *Journal of Applied Ecology*. 26: 247-257.

Marshall, E.J.P.; Moonen, A.C. 2002. Field margins in northern Europe: their functions and interactions with agriculture. *Agriculture, Ecosystems and Environment*. 89: 5-21.

Menalled, F.D.; Lee, J.C.; Landis, D.A. 2001. Herbaceous filter strips in agroecosystems: implications for ground beetle (Coleoptera: Carabidae) conservation and invertebrate weed seed predation. *Great Lakes Entomologist*. 34: 77-91.

Menalled, F.D.; Marino, P.C.; Renner, K.A.; Landis, D.A. 2000. Post-dispersal weed seed predation in Michigan crop fields as a function of agricultural landscape structure. *Agriculture, Ecosystems and Environment*. 77: 193-202.

Panetta, F.D.; Hopkins, A.J.M. 1991. Weeds in corridors: invasion and management. In: Saunders, D.A.; Hobbs, R.J., eds. *Nature conservation 2: the role of corridors*. Chipping Norton, Australia: Surrey Beatty: 341-351.

Povey, F.D.; Smith, H.; Watt, T.A. 1993. Predation of annual grass weed seeds in arable field margins. *Annals of Applied Biology*. 122: 323-328.

Smith, H.; Firbank, L.G.; Macdonald, D.W. 1999. Uncropped edges of arable fields managed for biodiversity do not increase weed occurrence in adjacent crops. *Biological Conservation*. 89: 107-111.

Westerman, P.R.; Wes, J.S.; Kropff, M.J.; van der Werf, W. 2003. Annual losses of weed seeds due to predation in organic cereal fields. *Journal of Applied Ecology*. 40: 824-836.