

25-12 Intensive Rotational Cattle Grazing Effects on Habitat and Fish and Macroinvertebrate Communities in Wisconsin Coldwater Streams

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Traditional continuous cattle grazing in riparian areas often degrades stream habitat and fish and macroinvertebrate communities. Vegetative buffer strips that restrict cattle from stream access are effective in alleviating much of the environmental concern. However, socio-economic factors limit the feasibility of vegetative buffer strips in many cases. An alternative method of cattle grazing, intensive rotational grazing, has been promoted as another way to protect stream ecosystems. In 1996 and 1997, we compared physical stream habitat and fish and macroinvertebrate community characteristics among sites with intensive rotational, continuous, or no cattle grazing (vegetative buffer strips). We selected sites from 21 southwest Wisconsin coldwater streams. Variation in habitat and fish and macroinvertebrate community characteristics among sites was strongly influenced by watershed differences. However, once upstream differences were factored out, vegetative buffer strip sites appeared to have the best stream health as indicated by the least bank erosion, the most instream fish cover, the most trout, the highest fish index of biotic integrity, and the least organic pollution as indicated by macroinvertebrate communities. In contrast, continuous sites were the worst. Intensive rotational sites have an intermediate rank with bank erosion, fish cover, and a macroinvertebrate assemblage similar to those of buffer sites while trout abundance, and fish index values were reflective of continuous sites. Intensive rotational grazing has potential for protecting southwestern Wisconsin coldwater streams, albeit not as well as buffer strips, but it may be a more acceptable practice for many farmers to implement.



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