Iowa Odor Control Demonstration Project: Landscaping

Robert T. Burns
Iowa State University

Follow this and additional works at: http://lib.dr.iastate.edu/extension_ag_pubs

Part of the Agricultural Education Commons, and the Bioresource and Agricultural Engineering Commons

Recommended Citation
http://lib.dr.iastate.edu/extension_ag_pubs/144

Iowa State University Extension and Outreach publications in the Iowa State University Digital Repository are made available for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current publications and information from Iowa State University Extension and Outreach, please visit http://www.extension.iastate.edu.
TECHNOLOGY DESCRIPTION

Landscaping—trees, shrubs, and other vegetation used to create a barrier around livestock facilities—is a technology thought to help reduce odor emissions from livestock operations. The barrier provides visual isolation and/or aesthetic enhancement, and affects airflow near the site. Eleven cooperators are demonstrating landscaping as part of the Odor Control Demonstration Project.

Windbreaks are thought to reduce odor emissions in two ways. If they are upwind, they help deflect the air currents up and over the odor source so less odor is collected and carried offsite. If they are downwind, they promote mixing and cause the air currents to rise, resulting in increased odor dilution. However, producers should be careful not to reduce the natural ventilation potential of the buildings, or to plant trees or shrubs so close to earthen storages that roots reach the sidewalls. Trees should be a minimum of 50 feet from naturally ventilated buildings to avoid interference with the building ventilation.

Visual protection and enhancement are added benefits of landscaping. A well-landscaped livestock operation that is pleasing to see, or even hidden from view, is more acceptable than one which is not.

Most landscaping treatments for the odor control demonstration project include some fast-growing trees such as Austrees, as well as some slower-growing, more permanent trees such as evergreens or hardwoods.
EFFECTIVENESS

Landscaping is considered somewhat effective as an odor control technology. Evaluations are not possible for the odor control demonstration project, since several years must elapse before the recently planted trees will be large enough to be effective.

COST

The costs of landscaping can be quite variable, depending on the species of trees and shrubs selected, and how many rows of each are planted. Based on the costs submitted by demonstration cooperators, costs per head of finishing swine capacity start at 20 cents.