

Fencing for Co-Management



O'AHU
RESOURCE
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Co-management:

Refers to managing farms and their surrounding environments such that multiple goals are achieved: natural resource conservation *and* food safety.

Co-management practices:

Refers to those *best management practices* (BMPs) which meet objectives in both natural resource conservation and food safety.

Fencing: A constructed barrier to animals or people.

How does fencing help?

Excludes wildlife which reduces the risk of feces and other contaminants from coming in contact with produce. Fencing reduces the ability of wildlife or livestock to transfer pathogens into a production zone.

Best use: *Good for farms near forested areas or zones frequented by ungulates*



Fencing used in central Maui to exclude invasive axis deer

Functions

- Wildlife exclusion
- Livestock enclosure



Benefits

...to food safety

- ❖ Reduced potential for animal fecal contamination in production zones

...to conservation

- ❖ Reduced soil disturbance from larger wildlife, critical to many native plants and ecosystems
- ❖ Improved water quality, as soil is at lower risk of erosion and hence reduced risk of sediment entering streams

Practicality

the pros

- ❖ Effective to eliminate damage from ungulates

the cons

- ❖ Expensive materials and installation
- ❖ State or federal restrictions regarding endangered species habitat may prevent installation

Literature Summary

- Electric fences reduced feral pig intrusions by 65% compared to non-electrical fences, with 2- and 3-strand fences having 40-50% fewer crossings than a single strand fence (Reidy et al. 2008).
- Hog wire panels were the most effective fencing option at containing feral swine, followed by woven-wire mesh and electric fences. Regular maintenance of hog panels and lethal removal by helicopter shooting further increased success to 97-100% (Lavelle et al. 2011).

References

- Lavelle, M. J, Vercauteren, K. C., Hefley, Phillips, G. E., Hygnstrom, S., Long, D. B., Fischer, J. W., Swafford, S. R., and Campbell, T. A. 2011. Evaluation of Fences for Containing Feral Swine under Simulated Depopulation Conditions. USDA National Wildlife Research Center - Staff Publications. 1326.
- Reidy, M. M., Campbell, T. A., and Hewitt, D. G. 2008. Evaluation of electric fencing to inhibit feral pig movements. *The Journal of Wildlife Management*, 72(4), 1012-1018.

Resources

1. Learn more about co-management: [Wild Farm Alliance: Food safety and Conservation Resources](#)
2. Learn more about food safety: [Roots FSMA Guide](#) & [Produce Safety Alliance](#)
3. Learn more about conservation practices and on-farm assistance opportunities: [Oahu RC&D](#) & [CTAHR Extension](#)

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