

Water Quality Enhancement Activity – WQL18 - Non-chemical pest management for livestock



Enhancement Description

The use of management, monitoring, and prevention techniques to manage external livestock pests without the use of pesticides.

Land Use Applicability

Pastureland, Rangeland, Forestland

Benefits

Environmental benefits will be operation specific.

Benefits may include, but are not limited to improved

animal health, reduced risk to humans and improved water quality. Pests and parasites can have a significant impact on the economic viability of livestock operations by affecting the performance and health of animals. The improper use of chemical control methods can pose risks to animal and human health as well as water quality. Nonchemical pest management strategies will require increased monitoring and management of livestock which should result in a higher overall level of management efficiency.

Conditions Where Enhancement Applies

This enhancement applies to all pasture, range or forest land use acres.

Criteria

1. Have a technical expert prepare a written plan addressing basic management considerations, including:
 - a. Pests/parasites of concern, including correct species identification
 - b. Monitoring process (jug traps, baited cards, on-livestock counts, fecal egg counts, FAMANCHA[®], etc) to determine when control is needed and to monitor control effectiveness
 - c. Sanitation, cleaning feed/hay sites, and manure removal to reduce breeding sites
 - d. Rotational grazing and how it will be used to disrupt pest life cycles, minimum residual forage height to reduce parasite ingestion.

2. Incorporate two or more of the following applications into the plan as appropriate:
 - a. Provide non-invasive plants with secondary compounds such as tannins and terpenes that can reduce internal parasites when grazed by livestock.
 - b. Provide for multi-species grazing to disrupt life cycles of host specific parasites.
 - c. Monitor dung beetle populations and enhance by eliminating or significantly reducing use of detrimental injectable, pour-on, and especially bolus type pesticides.



- d. If dung beetle populations are essentially non-existent, harrow or otherwise mechanically treat manure piles to speed up drying and decomposition.
- e. Incorporate pastured poultry, such as portable poultry wagons, into pasture rotations to eat fly larvae, 2-3 days after livestock leave pasture.
- f. Enhance populations of martins, swallows, and bats by providing roosts, nesting, and breeding sites as appropriate.

Adoption Requirements

This enhancement is considered adopted when a management plan has been developed, the management plan contains two or more of the sub-criteria to # 2 above, and the selected sub-criteria have been implemented.

Documentation Requirements

1. Copy of the written plan that includes:
 - a. Basic management considerations,
 - b. Specific selected prevention and monitoring techniques performed,
 - c. Dates techniques performed,
 - d. Effectiveness of applications, and
 - e. Other monitoring results.
2. Schedule of when grazing occurred on pastures and residual vegetation heights both at start and end of each grazing period.



United States Department of Agriculture
Natural Resources Conservation Service

IDAHO ADDENDUM 2012

Water Quality Enhancement Activity – WQL18 – *Non-chemical Pest Control for Livestock*

Additional guidance for non-chemical pest control:

The management plan used must be written by a qualified technical expert on pest control in livestock.

Black flies can be a problem in Idaho. Although black flies are highly mobile, biting intensity usually is greatest next to irrigation canals and streams or rivers where the larval stages of this pest live. Pasture your animals as far away from these pest sources as practical. Unlike mosquitoes, black flies generally do not enter buildings or other enclosed, darkened spaces. Simply-constructed shelters consisting of three solid walls and a roof can provide cattle, horses, sheep and hogs with refuge from biting attack in pastures and rangelands. Black fly control for beef and dairy cattle can be enhanced by placing back rubbers at the entrance to shelters to keep flies out. Black fly attack tends to be heaviest during the morning and early evening hours. When practical, keep your animals inside barns during these biting periods.

Other livestock pests include grubs, lice, mites, face flies, horn flies, stable flies, etc. For some flies, release of biological control agents like parasitic wasps, or walk-through fly traps, may be helpful. Proper manure management is essential to reduce pest problems. Indoor and outdoor fly traps can be very effective. Proper sanitation with clean bedding and cleaning spilled feed can also reduce pest problems. Routine monitoring of livestock for pest problems is important.

For additional information, refer to:

ATTRA, Integrated Parasite Management for Livestock.

<http://attra.ncat.org/attra-pub/PDF/livestock-ipm.pdf>

Cornell University, *Integrated Management of Flies in and Around Dairy and Livestock Barns*.

<http://nysipm.cornell.edu/factsheets/dairy/barnflies/barnflies.asp>

Washington State University Cooperative Extension, *Livestock IPM*.

<http://ipm.wsu.edu/livestock/livestock.html>

This activity may NOT be used with the following enhancements:

ANM23

Potential Duplicate Practices:

528 – Prescribed Grazing, 645 – Upland Wildlife Habitat Management