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3.0 LAND BASE MANAGEMENT

3.1 Know Your Resources

Understanding how farming and ranching practices affect the environment is an important part of sustainable, profitable livestock production. When and where cattle are placed on the land is important when considering the environmental health of the land base. By understanding how agricultural operations fit into the bigger picture, producers can identify problems and apply common sense solutions that will improve landscape health and increase productivity.

Maintaining a healthy landscape is everyone's responsibility. Food, water and shelter are the essential components of life for all living things. A healthy landscape supports agricultural activities while providing these essential components.

The first step in ensuring a healthy landscape is to evaluate the farming operation. It is

valuable to know the soil conditions and natural vegetation of the farm before it was converted to agricultural use in order to assess its various habitats.

Producers can improve the health of their operation's landscape by:

- Maintaining what they have.
- Improving what they have.
- Restoring sensitive areas that have been converted to agricultural use (i.e. intermittently wet areas and treed areas).

Improving the health of the landscape can be simple – such as retaining existing treed areas or adding fall-seeded cereals to a crop rotation, or more involved – such as planting natural areas to link existing habitats so animals can travel safely between these areas.

3.2 Managing Land Base

This section provides options for enhancing the three main types of farm habitat: cropped

land, non-cropped land, and wetlands and riparian areas.

3.2.1 Cropped land

Cropped land includes lands where native plant species have been removed and replaced with domestic annual or perennial plant species.

Cropped lands can provide shelter and food for ground-nesting birds and small mammals.

To improve habitat on cropped land:

- Convert lands that are marginally productive for annual crops into better-suited long-term forage production.
- Add perennial or annual forages to the crop rotation. Manage perennial forage stands for longer life.
- Use a flushing bar to flush out wildlife when haying.

- Cut hay on centre pivot, from inside-to-outside.
- Delay haying near wetlands to reduce nesting losses of ground-nesting birds. Wait until at least July 1, and whenever possible, delay until mid-July when bird nesting is usually near completion.
- Use direct-seeded fall crops.
- Reduce tillage to increase the diversity of soil life (e.g. earthworms and mycorrhiza).
- Eliminate fall tillage to maintain cover and provide food for wildlife during the winter.
- Use strip cropping instead of conventional fallow.
- Use integrated pest management to minimize harm to non-target species.

3.2.2 Non-cropped land

Non-cropped land includes native hayland, native pasture, shelterbelts, woodlots, bush, abandoned farmsteads and field borders. This land often has patches of native plants that are beneficial to wildlife.

To improve habitat on non-cropped land:

- Retain existing natural areas.
- Enhance the habitat value of treed areas, including shelterbelts, by adding fruit and nut-producing trees and shrubs, and leaving dead trees.
- Provide or retain corridors, such as fencelines and shelterbelts, between key habitat areas to provide shelter for wildlife moving between these areas.
- Use a flushing bar when haying. Delay haying near wet areas until mid-July when bird nesting is usually near completion.

- Avoid overgrazing and delay spring grazing near wet areas to minimize damage to soil and nests.
- Enhance the habitat value of idle areas such as field borders and abandoned farmyards by planting a variety of grasses, legumes, shrubs or trees, and adding nesting boxes.
- Maintain vegetative buffers between uncropped lands and wetlands because these areas contain additional diverse food and cover.
- Manage the farm's dog and cat populations to minimize excessive impact on non-pest species.

3.2.3 Wetlands and riparian areas

Wetlands are covered by water for all or part of the year. These moist conditions influence soil characteristics and support water-loving plants. Healthy wetlands and riparian areas reduce flooding, prevent erosion, protect water quality and provide wildlife habitat.

To improve habitat in wetland and riparian areas:

- Retain temporary wetlands. Small spring ponds provide important early spring breeding habitat for wildlife.
- Grow perennial forages for hay in wet areas.

- Protect vegetative buffers adjacent to riparian areas.
- Maintain, restore or enhance riparian vegetation (trees, shrubs and forages) to provide:
 - Breeding, feeding, nesting, travel corridors and cover for bird species and wildlife.
 - Shade, which regulates temperature for improved fish habitat.
- Use a flushing bar when haying. Delay mowing and haying of grassed waterways and other wet areas until mid-July when bird nesting is usually near completion.

3.3 For More Information

Contact the following offices for the publications listed or for more information.

Cows and Fish

(403) 381-5538

www.cowsandfish.org

• *Caring for the Green Zone.*

• *Biodiversity and Riparian Areas.*

• *Value of Wetlands.*

Alberta Environment

(780) 944-0313

www.gov.ab.ca/env

• *Focus on Wetlands.*

Environment Canada

(780) 951-8600

www.ec.gc.ca

• *Hinterland Who's Who Series.*

North American Waterfowl Management Program

(780) 489-2002

www.nawmp.ab.ca/programs.html

• *NAWMP Programs: Flushing Bar.*



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