

# Pasture and Range Health FACTSHEET

## IMPROVING LIVESTOCK DISTRIBUTION

Poor livestock distribution is one of the major causes of unhealthy rangelands and may also reduce the production potential of your herd. Livestock distribution refers to the dispersion of grazing animals over an entire pasture. Ideal grazing distribution, while often impractical, occurs when proper utilization extends uniformly over the entire pasture. Livestock unfortunately, often prefer to graze in the same area day after day, season after season.

These grazing habitats are contrary to the concept of uniform grazing distribution and, as a result, the producer must try to entice their livestock to other locations within the pasture. Improved grazing distribution results in higher harvest efficiency because livestock consume a greater proportion of the available forage.

Numerous factors affect grazing distribution on British Columbia's tame pasture and native range including; predators, recreationists, topography (slope, aspect), water availability (including stock water developments and direct water access), supplement placement (mineral and salt), alternative or improved forage, fencing, livestock barriers, and various herd management and animal husbandry practices including herding, culling, turnout, livestock type and class, and handling facilities. By increasing the distribution of your livestock you can often create several benefits including:



- Increased grazing capacity. By accessing more of your pastures and harvesting a greater proportion of available forage, you may be able to increase your herd size while using the same land base.
- Decreased use of sensitive areas. You may be able to sustain or restore environmentally fragile areas, such as riparian areas, without removing your livestock entirely.
- Decreased erosion.
- Improved fish and wildlife habitat. Increased distribution gives you a greater ability to condition your pasture for wildlife or reduce use of highly sensitive wildlife areas.

While it is impossible to modify the topography of your pastures, there are some readily available tools that can assist you in improving the distribution of your livestock.

## Water Availability

Water is the most important distribution tool on your range. Livestock need water and as a result will spend a majority of their time near it. While it is impossible to implement on a majority of BC's rugged rangelands, a good rule of thumb is that the distance between drinkable water sources should not exceed 3.2 km (2 miles).

## Stock Water Development



Developing water away from concentration area, including; riparian areas, gates, fence lines, and other easily accessible areas, has been shown to significantly reduce livestock foraging and loitering in these areas. Numerous techniques can be used to develop an alternative water source including installing ram, solar or conventional pumps; developing springs, seeps or wells; and piping water to several troughs once collected. For additional information on stock water development, please refer to the *BC Livestock Watering Handbook*.

## Direct Water Access

While watering livestock directly from a water source may constitute a pollution risk, well developed and managed access sites will greatly reduce any environmental impact. Well managed access sites restrict access to a small area and may include hardened crossings and water access points consisting of gravel. This provides sure footing and a gentle grade that allows livestock to comfortably drink or cross a water source. Another way to ensure sure footing and prevent bank damage is to locate your direct water access site in a naturally rocky area.



For more information on this subject, please see the *BC Livestock Watering Handbook*.

## Supplements

Salt, mineral, and protein supplements are useful tools that can aid in distributing livestock away from riparian areas. It is important however to supplement as far as possible from any water source. A good rule of thumb, if possible, is to maintain a distance of approximately 1.2 kilometers (0.75 miles) between attractants and do not under any circumstances supplement near water. Other possible supplements that can aid distribution include hay, grain, molasses, etc.

When choosing supplements it is important not to overestimate their effectiveness. For example, studies have shown that the placement of salt on some ranges had little or no effect on livestock distribution. Other supplements, such as low-moisture molasses-based high-protein supplement blocks however, have been shown to increase the uniformity of livestock grazing on rugged rangelands. In fact, research from Montana has found these supplements to be even more attractive than water during the fall and winter. These studies have also concluded that strategically placed low-moisture molasses-based high-protein supplement blocks, improved pasture and livestock production efficiency, improved range management by drawing cattle away from overgrazed areas, and increased the use of steep slopes (up to 30 percent).

## Alternative or Improved Forage

Another useful distribution technique is the development of alternative or improved forage away from your riparian area. This can be achieved in a variety of ways including fertilization, seeding, prescribed burning, and tree thinning.

## Fencing



Besides stock water development, fencing is the most effective method of managing livestock distribution on your range or pasture. In order to maximize the benefits that fencing can obtain however, you must ensure that it is properly located, well-constructed and maintained. A fence that doesn't meet the aforementioned criteria can result in more negatives than positives! Ideally, fences should be used to separate different forage types. For example, a tame pasture should be fenced separately from a forest, a forest from native grassland, native grassland from a riparian area etc. In most cases, exclusion fencing should be considered only when all other avenues have been exhausted. It is expensive, requires more fencing, and involves a great deal of maintenance. It may also be a band aid solution that fails to deal with the grazing management problems that may be occurring on all aspects of the ranch.

In some cases however, it may be a viable option if, for example, stream banks are extremely fragile or severely degraded, topography and vegetation patterns are complex, or in situations where intensive management is needed (e.g., weed control, calving, winter feeding, etc.). When constructing corridor fencing please consider the following: Is the exclusion area going to be grazed in the future? If it is, it should be wide enough to allow effective grazing to take place. For more information on planning a pasture, please refer to Factsheets 4 and 5 involving **Pasture Design**.

## Barriers

Various types of barriers may also be used to control livestock distribution. For example, fallen trees and large boulders can be used to block off water access points and trails thus discouraging use in those areas. Plants that form a physical barrier due to thorns or dense growth (e.g. hawthorn, rose), or have low palatability, can also deter livestock from using an area. Natural barriers combined with fencing can also achieve the above results by regulating trailing and loitering in some areas.

## Herd Management and Animal Husbandry

Various herd management and animal husbandry techniques can also be employed to improve distribution and thus harvest a greater proportion of your available forage.

## Herding



Herding is another method that can be used to improve distribution and facilitate uniform utilization throughout the pasture. The only downfall of this tool is that it is labour intensive and in most cases requires daily riding and herding. Herding combined with other tools including strategic supplementation however, can decrease labour costs and can be more effective than herding alone.

## Livestock Turnout

In large paddocks with adequate stock water you may be able to control livestock use in your riparian area by turning your livestock out well away from the riparian areas.

## Culling

Livestock foraging habitats have been shown to vary with breeds and herds. Some individuals often spend more time in riparian areas while others tend to forage widely. Animals that favour level, riparian, or shaded areas may pass this trait down to their offspring. If this is happening in your herd, culling these animals as well as selecting those with desirable grazing patterns may be tools you may want to consider.

## Livestock Type

Different livestock types forage in different ways. For example, herded sheep may offer different options when grazing since the herder is able to control location, timing, utilization, duration, and frequency of use. In addition, sheep grazing may reduce physical plant damage due to their nibbling characteristics and when properly managed typically cause less trampling damage than cattle. You may also want to match livestock breed to pasture conditions.



## Livestock Class

In general, cow-calf pairs tend to be the most difficult livestock class to distribute as they tend to spend a large portion of their time near riparian areas loafing and foraging. Yearlings and nonlactating cows however, often distribute themselves more widely throughout a pasture.

## Livestock Handling Facilities

If possible, all livestock handling facilities including corrals and bed grounds should be located as far as possible from riparian areas.



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### FOR FURTHER INFORMATION CONTACT

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