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A voluntary partnership with private landowners

Livestock Management Challenges in Alaska

By J. David Swanson and Jeanette Colville, NRCS, Anchorage, Alaska

Range fires, livestock diseases, competition for forage, predators, land use conflicts, severe weather conditions, bureaucratic red tape, and unpredictable markets—a familiar scenario to the challenges facing livestock growers in the Great American West. Take the same ingredients with a bit of a twist and you have the same challenges faced today by Alaska's reindeer herders. On the Seward Peninsula in the Bering Sea region, predators are wolves and bears; competitors for forage are musk ox and caribou; and forage is tundra grasses, berries, and lichens.

Reindeer herding is well integrated into the history of rural Alaska. Reverend Sheldon Jackson, General Agent of Education, brought the first herd of reindeer from Siberia in 1891 to provided a stable food supply for Native Alaskans following the decline of caribou in the late 1800s, and the negative impacts of commercial whaling, ivory harvesting, and epidemic diseases.

Reflecting the success of the introduction of reindeer into Alaska, USDA Natural Resources Conservation Service Range Conservationist J. David Swanson and University of Alaska-Anchorage Professor M.H.W. Barker reported at the First Arctic Ungulate Conference in Nuuk, Greenland, in September 1991, "that as well as a normal part of the local diet, shipment of reindeer meat to the lower 48 states in the late 1920s was around five million pounds. By-product markets were developed for antlers, blood and viscera. Antlers were exported and used for knife handles and for their perceived aphrodisiac properties. Skins were used locally for items of apparel. Corrals, slaughtering plants, underground storage tunnels and shipping facilities were contracted throughout the reindeer areas."

Early cooperative efforts between the Bureau of Biological Survey and the Alaska College of Agriculture and School of Mines began in 1920 to initiate reindeer husbandry and range management focusing on breeding, forage, animal habits, disease, insects, morphology, and caribou crossbreeding. During the early 1930s, herd populations thrived, numbering more than 120,000. Following this period of growth, herd populations began to decline, attributed to inadequate herding, loss of winter lichen range, wolf predation, and economic pressures, with herd numbers dropping to about 10,000 by the early 1950s.

A dramatic impact to the reindeer industry has been the first shift in more than 100 years in the

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Cover photograph: Alaska reindeer herd on the Arctic tundra in the Seward Peninsula.

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winter migration pattern of the Western Arctic Caribou Herd (WACH), bringing as many as 90,000 caribou into the Seward Peninsula reindeer grazing areas in winter. The remainder of this huge 463,000-head herd has kept beyond the eastern areas of the peninsula. Although the number of caribou migrating within the peninsula dropped to about 10,000 this past year, according to Alaska Fish and Game managers in Nome, the impact on the reindeer herds has been intense, with some reindeer herds along the eastern permit areas disappearing completely, wandering off with the migrating caribou as they leave the area on their summer migration north across the Brooks Range to Alaska's North Slope.

Large numbers of wolves following the caribou migration have moved into many of the reindeer ranges, becoming resident populations preying on the more static food source of the reindeer herds. "The great influx of caribou in the previous two winters resulted in 100% loss of preferred winter reindeer forage in the lowlands," said Swanson, "and reindeer herders are aware of the critical importance of winter feed supplies, with overgrazing and fire presenting the greatest danger to lichen winter ranges." Lichens, the winter staple of the reindeer, grow at the rate of about one-sixteenth of an inch per year.

The Alaska Reindeer Herds Association (RHA), headquartered in the small remote village of Nome on the Bering Sea, is a program of Kawerak, Inc., an Alaska Native regional non-profit corporation. The RHA is a group of eighteen herd owners and three Tribal Councils. This association has worked hard to upgrade management of herd population using scientific range practices with technical assistance from the University of Alaska and the USDA Natural Resource Conservation Service (NRCS).

From 1976 to the present, NRCS has been working with the association helping to improve reindeer production and management. From 1976 to 1983, ecological sites were mapped and all information in GIS format for the permit areas, NRCS has been training the reindeer herders on the use of soil, vegetation, hydrology and other data layers. Up until the influx of caribou on the peninsula, many herders were working with rotation grazing systems and going to great lengths to manage their ranges for improved lichen production. Conservation plans developed during the 1980s employed a 5 to 7-year rotation grazing system. This resting time provided lichens an opportunity to recover sufficiently after grazing. NRCS, University of Alaska-Fairbanks, Bureau of Land Management, National Park Service, and the Herders Association have worked hard to evaluate range conditions and to fine-tune herd management. Overall, on the Seward Peninsula, lichen production was increasing and range conditions were also improving. Caribou, however, were quick to recognize the forage opportunity.

The WACH has not always been so large, and during the late 1970s, caribou herd size was a cautiously guarded 76,000. The increase of the WACH has been phenomenal. Ironically, the work that was done by herders and agency specialists to maintain and improve forage conditions may have been a major factor that attracted the caribou to the area. This has been a difficult time for the industry—difficult to watch reindeer herders lose their reindeer and the use of their ranges. Some of the herders have lost all of their reindeer and have had to move away from their home villages and relocate to other parts of Alaska. Still, the way of life and the challenge to earn a living off reindeer herding lies deep in the heart of the herders. They remain optimistic and wait for the time when the caribou will migrate to the Nulato Hills east of the peninsula so they can start reindeer operations again. Many options have been explored, but natural events are difficult to control in this remote sub-arctic environment.

NRCS Technician Steven Gregory surveys winter lichen forage on the Davis reindeer herd range.

NRCS is working with the reindeer herders through the Alaska Soil and Water Conservation District with USDA's Environmental Quality Improvement Program (EQIP). This year, RHA will deploy several satellite collars to help manage the remaining reindeer and the winter range as efficiently as possible. Plans are to deploy the collars this September and monitor reindeer locations throughout the yearly seasons. All the key players are looking forward to expanding the scope of EQIP with hopes that it might provide herders with an effective range management tool.

Sitting in her small office in Nome, surrounded by boxes of ear tags waiting for distribution to herders for this year's roundup, RHA Executive Director Rose Fosdick expresses her concern for the future of the reindeer industry. "The reindeer herds have been impacted by the migrating caribou herd for the past five to ten years. The caribou merge with the reindeer herds and the reindeer follow them off when they leave the area. The caribou bring predators with them—wolves, brown bears, ravens, foxes—and they transfer brucellosis and other parasites, reintroducing them into the range." The two most critical issues facing the herders, according to Fosdick, is the winter competition for lichens, and the need to update range data on fire. "In the spring, when it's time to round up, weights are down, and each year there are fewer and fewer animals."

Streamside Grazing Workshop

A streamside grazing workshop will be held at the Eagle Bluff Environmental Learning Center in southeastern Minnesota on September 8 and 9. This is a cooperative effort among the Minnesota, Iowa, and Wisconsin state GLCI Steering Committees. The first day of the workshop will be held at the Eagle Bluff Environmental Learning Center near Lanesboro, MN. Speakers will include livestock producers, university professors, researchers, veterinarians, agronomists, biologists. Major topics to be addressed include:

watershed assessment

animal health

economics

riparian area management

animal behavior

bio-diversity
water quality regulations

grazing management

effects of water quality on fish/ wildlife/livestock

The second day of the workshop will be a tour of three successful grazing operations in the area:

The **Ralph Lentz Farm**, near Lake City, is a grass-based beef operation. The effects of various grazing strategies on riparian area corridor management have been studied on the Lentz Farm since 1967. Highlights of this tour stop will include winter feeding systems, warm season grass establishment, forage production and management, and monitoring for water quality and ecosystem health.

The **Pat and Stephanie Murphy Farm**, also near Lake City, is currently used to pasture replacement dairy heifers. This tour stop will include discussion of grazing system design to improve forage production profitability and improve water quality and stream characteristics. An electrofishing demonstration will allow participants to see how trout are thriving in the streams of this farm.

The **Jerry and Kim Wiebusch Farm**, near Zumbro Falls, is a grass-based dairy. This tour group will feature rotational grazing, water delivery systems, wildlife, windbreaks, low-cost parlor design, soil health, runoff, and nutrient management. Tools used to track ecological performance (such as soil structure and bird counts) will be demonstrated.

Registration fees will include overnight accommodations and meals provided by the Eagle Bluff Environmental Learning Center. For more information about the tour, contact: Dennis Neffendorf, USDA-NRCS, 375 Jackson St., Suite 600, St. Paul, MN 55101, 651-602-7867.

Experts in the Field..... Literally!

By Joan Love Smith, NRCS, Auburn, Alabama

Many Alabama grazing management experts participated in an Alabama Grazing School, May 18-20 at the Blackbelt Research and Education Facility in Marion Junction, Alabama. About 40 staff members of the Alabama Cooperative Extension System (ACES) and the Natural Resources Conservation Service (NRCS) participated in the session and evaluated it for future presentation to interested cattle producers throughout the state.

The school included indoor sessions and field exercises about many aspects of grazing management. Among the topics discussed were pasture allocation, physiology of forage growth, stocking rates, animal grazing behavior, nutritional requirements of livestock, dealing with parasites, nutrient recycling, environmental impacts of grazing, fencing systems, water requirements and availability, grazing system design and layout, and dealing with mud in grazing systems.

For more information about this and future Alabama grazing schools, contact: Don Ball, 334-844-5491 or dball@acenet.auburn.edu.

Pictured above: Instructors for the Grazing School held in Marion Junction, Alabama. L-R Standing: Walter Prevatt, Glen Abney, Jim Holliman, Mary Miller-Goodman, Bill Hughes, Perry Oakes, Darrell Rankins, Ken Rogers. L-R Kneeling: Mike Davis, Sid Brantly, Diego Gimenez, Don Ball

"THE CHAIR'S CORNER"

We begin this new column in response to numerous inquiries from individuals and coalitions across the nation for more communication from the National GLCI Steering Committee. In each issue of *GLCI News*, I plan to inform you of items of national interest to GLCI which have ramifications to all who own, manage, use, or benefit from private grazing lands. I will also use this space to challenge you and, hopefully, to encourage you. With this having been said, here goes...

The National Committee has been working on several issues this spring. Among the more important ones are: 1) a new Presidential Executive Order on Invasive Species and a recently introduced bill on invasive species, S.910; 2) GLCI appropriations for fiscal year 2000; 3) implementation alternatives for the newly issued USDA/EPA strategy on animal feeding operations and confined animal feeding operations; 4) conservation funding for technical assistance by NRCS; 5) grazinglands research funding for ARS and state experiment stations, and 6) proposed closing of the ARS Grazinglands Research Laboratory at Ft. Reno, Oklahoma. We are continuing to work on each of these issues. All of them are important to GLCI and our partners throughout the United States. I will keep you informed as to the status of these issues and what actions may be needed.

The E.O. on Invasive Species and S.910 are available for your information on our GLCI web site, www.glci.org.

BOB DRAKE, Chairman
National GLCI Steering Committee

GLCI News

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