Managing Grazing Resources for Profit on Commercial Timberlands¹

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Highlight

Grazing income from commercial timberlands is a source of revenue to a commercial timberland owner. However, grazing plays a minor role and is subordinate to the management and harvesting of timber. The grazing lease itself is an expression of the timberland owner’s policy and is an important tool used in managing the grazing resource. Harvesting forage utilized by big game can be accomplished by leasing cabin sites to selected individuals.

Of primary importance in managing grazing resources for a profit on commercial timberlands is the resource—land—and its complementary factors that make land suitable for grazing.

Georgia-Pacific Corporation is one of the world’s largest tree farmers, owning over 3.5 million acres of commercial timberlands. Its Western Pine Division, Pilot Rock, Oregon, consisting of 103,000 acres of these lands, is located within and along a portion of the northerly edge of the Blue Mountains in northeastern Oregon.

The lands lie between 2,000 and 5,000 ft elevation. The terrain is both rolling and mountainous, and is dissected into steep “breaks” along the main drainages. The soil varies from stony loams on upper slopes and on south slopes, to deep silt loams in valleys and on north slopes. By and large, the soils are loess and volcanic in origin.

Temperatures range from −30 F to 120 F. An annual average low humidity creates a rather dry climate. Precipitation varies from 14 to 20 inches annually. A substantial proportion of the moisture received is in the form of snow. Tributaries of the Columbia River drain the area. The water storage capacity and the water from the Corporation’s 103,000 acres is comparable in quality and quantity to that of other lands in the area.

The dominant timber species is ponderosa pine. The associated species are inland Douglas-fir, grand and alpine fir, western larch, Engelmann spruce, and lodgepole pine. The key forage grasses, bluebunch wheatgrass (Agropyron spicatum), Sandberg bluegrass (Poa secunda), and Idaho fescue (Festuca idahoensis) are found in openings and park-like areas. Other forage grasses include Kentucky bluegrass (Poa pratensis), pinegrass (Calamagrostis rubescens), and elk sedge (Carex geyeri), which occur in forested areas. Cheatgrass (Bromus tectorum) is an important source of early-season forage.

Land Ownership and Management

The timberland ownership pattern is scattered and varies in size of tract. The largest tract being 18,000 acres and the smallest, 40 acres. Currently there are 60 tracts split among 45 stockmen who lease the timberlands for use as summer range. Only the larger tracts lend themselves to more than perfunctory grazing management. However, every acre is leased and contributes some share to

the over-all grazing income. The adjoining land and intermingled ownership patterns are: private ownership—mainly stockmen; Umatilla Indian Reservation; U.S. Forest Service; State of Oregon; and B. L. M. land.

Income from leasing the forage on the timberlands plays its part as a source of annual income to partially offset land costs during the interim between logging operations. In striving to obtain and maintain a steady annual income from grazing, the landowner (lessor) soon realizes that resource conservation and resource stability must be maintained, despite all temptations to mismanage the resource for a temporary advantage, and despite all cajoling from those lessees who would have you operate otherwise.

Proposed expenditures for range improvements or rehabilitation are studied carefully before being approved. There must be a better-than-break-even assurance that income will be increased, or that the expenditure will pay for itself and maintain the current level of grazing income. Rangeland improvements cannot be subsidized from other sources of income. Georgia-Pacific actively attempts to increase its grazing income and enhance the value of its lands by employing modern grazing techniques that fit its lands and the goals of its management.

Of secondary importance is the smooth meshing of range management objectives with timber management and timber harvesting policies and objectives. Georgia-Pacific Corporation is geared so as to derive the major portion of its revenues from forest products; consequently, all other sources of income from land play a minor role and are subordinate to the management and harvesting of timber.

Coordinating range management objectives with the policies of timber management and harvesting basically involves rangeland improvements and time of use. Rangeland improvements, particularly fences, gates, cattleguards, and water developments, are costly items for both the timberman and stockman.

In an active timber-harvesting area, oftentimes the only answer to fences is to remove them and then replace them after logging. When fences are removed or opened, the stockman is faced with moving his stock out of the area or letting them stray. Log transportation requires that wherever and whenever a fence crosses the transportation route, a decision must be made whether or not to: (1) move stock out of the area; (2) install and maintain a cattleguard or gate; (3) accept time loss involved in opening and closing the gate; or (4) let the stock stray through the gate. Occasionally, timber falling and skidding operations damage or destroy water developments and salting facilities. More often than not, these improvements, while regarded as a necessity by the stockman, are regarded by the timberman as obstacles to orderly logging. Coordinating schedules with logger and stockman will alleviate some of the conflicting problems of time of use of the area.

Additional costs to consider are those engendered by the presence of stock in the logging area. These costs are a result of injury or death to animals and destruction to logging equipment in collisions, and extra precautions that must be taken to keep blasting powder from the cattle. Also, during certain seasons, extra precautions have to be taken to keep stock from eating the pine needles in the slash.

There are some logging and rangeland improvements that are mutually beneficial. Water developments can serve both parties by doing double duty as fire ponds and stock water sources; roads and trails can be used by timberman and stockman, both parties become mutually involved in prevention, detection, and fighting fire. Georgia-Pacific has noticed little if any adverse effect on reforestation or timber growth as a result of controlled grazing. The utilization of competing vegetation may be of mutual benefit. There is some reason to believe that an occasional controlled heavy grazing period may actually benefit commercial timberlands by exposing the mineral soil needed for the establishment of natural timber reproduction.

The cost of protecting rangeland improvements during harvest periods must be absorbed by either the logging operation or the grazing operation. Usually the price charged for rental of the grazing land reflects recognition by the range lessor of the possible benefits, the foreseeable problems and the costs involved in the harvest operation.

The ideal time for the range manager to consider the above-mentioned costs, problems and benefits is during the preparation of the range management plan. Any slighting or inattention to timber management and timber harvesting policies at this time can lead to costly errors in both endeavors, and lead to an embarrassing review of the range manager’s shortsightedness.

The Grazing Lease

An item of importance in managing grazing resources for a profit is the grazing lease. The stockman looks upon the grazing lease as an expression of the lessor’s grazing policy. The rights, privileges, and duties of both parties should be spelled out in sufficient detail so as to preclude any misunderstandings and/or disappointment as to the expectations of either party.

The grazing lease in use at Pilot Rock evolved through the years to its present form, where it
As Georgia-Pacific's rangelands in the Pilot Rock area are covered by some 60-odd leases bearing 45 or so signatures, it is advisable to use a standard lease form. A standard lease reduces the work load of the administrator, thereby increasing the profits derived from grazing.

In addition to the usual clauses one would ordinarily expect to find in such a lease, Georgia-Pacific includes a clause requiring that only animals owned by the lessee shall be grazed on the leased land: in other words, "no boarders." This clause eliminates the lessee who proposes to run "boarders" at a profit on lands leased from Georgia-Pacific. We object to this type of lessee on the grounds that he is not likely to be in sympathy with our range management objectives. This same clause also eliminates a middleman, thereby tending to increase profits to both lessee and lessor. There is, however, a provision in the lease that makes it possible for a lessee to "board" up to 20% of the permitted animal units at any one time. This provision recognizes that herd numbers fluctuate from time to time for various reasons, such as a change in the type of lessee's operation, market prices, loss of a portion of a herd through disease, or other causes. Full use of the range can thus be obtained for a period of the lease, regardless of such fluctuations.

Another paragraph deals with hunting rights to the land. This clause stemmed from a conflict between the Georgia-Pacific policy of permitting non-exclusive hunting on its lands wherever operationally possible, and the practice of the stockman who, under the guise of protecting his stock, discouraged or prohibited public hunting, and utilized for himself, or sold or gave, an exclusive hunting right to a favored few. The granting of hunting rights is reserved to Georgia-Pacific. However, the stockman may post the land against hunting. In the event that the stockman does post the lands, Georgia-Pacific is under no obligation to enforce such posting, and neither party may hunt or grant the privilege to others to hunt on the leased lands. This gives some protection to the stockman who has legitimate reason to fear for his stock's safety during the hunting season.

Turn-on and turn-off dates vary, depending upon the stage of growth and degree of use of the range and the timber harvesting plan. A key clause spells out the number and kind of stock that may be on the leased land and the period during which the stockman has rights to the leased land. When a lease runs from January 1 through December 31, year after year, the stockman tends to vest himself with proprietary rights to the land. Limiting the length of the lease to the period between turn-on and turn-off dates seems to forestall this tendency.

Another clause deals with the question of hunting during the hunting season. It specifies that hunting is not permitted on leased land during the hunting season. The lease contains a provision that either party may hunt on its leased land any time the lessee cannot be found to enforce this provision.

The majority of the leases in the Pilot Rock area are limited to the current grazing season. Leases of a longer duration are executed only when some special advantage will evolve to Georgia-Pacific or when a stockman makes appreciable improvements to the land at his own expense. Experience indicates that a current-season-only lease best guarantees compliance with the terms of the lease and requires the least supervision. Leases are not transferable, and do not confer any proprietary interest; consequently the sale value of the stockman's home-ranch is not enhanced.

With a few exceptions, the leases are uniform and standard as to price and terms. Payment dates are varied to suit the lessee's type of operation. On occasion, when hardships are known to exist, minor terms of the contracts have been modified to the extent deemed compatible with the hardship. This modification is usually recorded in the form of a letter and is in force only so long as the hardship exists.

Supervision and policing of the contract is accomplished by unannounced spot checks. The frequency of the checks depends upon the time available or required for this purpose. A check of the number of animal units of stock turned on the range is sometimes difficult to obtain. On our solidly-blocked lands this is possible. Spot checking turn-on has been found to be satisfactory. Spot checking, to be effective, must not evolve into a pattern. Where range improvements are agreed upon, a thorough check for compliance with the agreement is always made. Contracts specifying range improvements generally require that the stockman perform the labor and the Corporation supply the materials.

There is a small turnover each year in the list of lessees. The turnover is a result of lessees' selling out, retiring, moving out of the area, etc. In instances when a lessee dies, the Corporation offers the lease to the heirs. When Georgia-Pacific purchases lands, first refusal of a lease is usually offered to the owner, or lessee, of the land at the time of purchase. Otherwise the Corporation policy is initially to offer to lease its grazing lands to local stockmen in the immediate area. Rarely has the Corporation had to go outside the area to find a satisfactory lessee.

It is good policy never to promise to lease land to any applicant until the land is available and the prospective lessee is agreeable to and understands the lease terms. By and large, in choosing a prospective lessee, we use the following criteria:

1. Is he a neighbor, or lessee of, intermingled and adjacent Corporation-owned lands?
2. Is he a legitimate stockman, i.e., does he derive a substantial portion of his livelihood from stock raising?
3. Can a mutually beneficial plan of grazing management, range improvement and grazing policies be effected?

The judicious selection of the lessee helps to achieve the goal of managing the forage crop so as to produce the optimum returns from grazing consistent with timber management objectives. Ideally, the lessee should be, at least to some degree, sympathetic to these objectives, and his standards akin to those of the lessor. The most difficult lessee to deal with is the one who persistently needles the grazing manager to relax or lower grazing management standards. This badgering becomes rather common during favorable grass-growth years. The lessee must adhere to the principles of good range management and enforce them through the lease. Otherwise, the resource can regress to an unstable situation, both economically and ecologically.

It is necessary to make occasional utilization checks and studies of range trends. It is Georgia-Pacific’s practice to make the initial check or study without the distraction of the lessee’s presence. After the study or check has been analyzed, then a second trip over the range is made with the lessee. It is on this trip that the lessee can be encouraged to point out the progress of or shortcomings to the range management plan. Oftentimes he can shed light on good results and isolate problems.

These discussions can help the range manager judge the success of the operation and program and plan accordingly for the future.

Other Resources and Benefits

Leasing to local bona fide stockmen provides the Corporation with profitable, tho not always tangible, side benefits. It is not unusual for local stockmen to own timberlands bearing merchantable timber. When this timber comes on the market, Georgia-Pacific’s lessees usually cooperate by notifying them that the timber is for sale. This assures the Corporation at least the opportunity to bid for the timber. Then, too, rights-of-way are granted more freely to the Corporation when lessees or their neighbors have the opportunity to lease the available land. Furthermore, in leasing to local stockmen, the Corporation to some extent enters into the life of the community as a participant in its affairs and problems. The feeling is that leasing to local stockmen indicates to the people that Georgia-Pacific does have an interest in the well-being and stability of the community. This feeling cannot help but smooth Georgia-Pacific’s path in its endeavors. Also, there are a number of national, state, and local land-management problems that affect Georgia-Pacific as well as local stockmen and the local community. Mutual interdependence, generated by the policy of local leasing among these parties, can lead to an effective “grass roots” program to campaign for a locally acceptable solution of these problems.

In addition to livestock, the grazing resources of Georgia-Pacific’s timberlands support a sizeable population of big game, primarily deer and elk. Generally speaking, leasing or selling hunting rights on private lands has not reached the Pilot Rock area. As mentioned, earlier, Georgia-Pacific’s policy is to open as much of its lands as possible to free use by the public for hunting and other types of outdoor recreation.

In Oregon the game belongs to all its citizens. Big game doesn’t differentiate between public and private lands, however, when it comes to feeding. A recent research report by the Pacific Northwest Forest and Range Experiment Station, Blue Mountain Research Center, entitled A GUIDE TO THE STARKEY EXPERIMENTAL FOREST AND RANGE states, “The demand for forage by big game on summer ranges is estimated at 29% of the grazing capacity for livestock.” Since big game utilizes considerable forage produced on private lands, thereby decreasing the amount of forage available to livestock, it seems reasonable that some monetary return should accrue to the landowner.

One method the landowner might consider to recoup this loss of forage and resultant loss of income would be to lease fractional acreages or lots scattered throughout his grazing lands, as sites for hunting and recreation cabins. Exclusive hunting rights to the grazing lands need not be let with the lease of the cabin site. Judicious selection of reliable lessees, coupled with the strategic location of cabin sites, should expedite the harvesting of the crop of big game. By this means, a legitimate income would be derived indirectly from forage used by big game. This would compensate the landowner for the loss of forage that otherwise could be utilized by livestock. One might express this thought another way, viz., if it is considered to be in the public interest to encourage big game use of suitable lands, irrespective of ownership of the land, and it is good public relations to invite hunting on private ownership, then why not combine objectives, namely: (1) protect livestock through the indirect selection of reliable hunters; (2) increase the harvest of big game; (3) obtain a return on the forage and land used by both the hunter and his quarry.

One of the intangible profits derived from the managing of grazing resources on commercial timberlands is water. Nowhere in the Corporation’s financial statements is the water from its lands listed as an asset, much less given a monetary value. Nevertheless, Georgia-Pacific has more than just a passing awareness that this water is a by-product
of its lands, for it requires and utilizes tremendous quantities of hydro-electric power and water to process raw forest products into finished products desired and purchased by its customers.

The goal of managing grazing resources of commercial timberlands is to obtain a profit. Therefore, the policy can be stated as follows: "manage the lands so as to obtain the optimum benefits, tangible or intangible for the owner, in return for the owner's investment in money and time. Periodically these 'benefits' should be examined and evaluated to determine whether they reflect current conditions and trends. If they do, then the existing method of operation should remain unchanged." This policy is in line with, and no different from, the policy of any stockman who is making similar investments of money and time in his ranch and its operation.

BOOK REVIEWS


Professor Underwood is without question one of the foremost authorities on mineral nutrition of livestock. His earlier text book, "Trace Elements in Human and Animal Nutrition" published first in 1956 and revised in 1962 received worldwide recognition as being the most complete and thoroughly documented book in this field.

In the current text, Professor Underwood presents a brief history of mineral malnutrition of livestock, describes the symptoms and metabolic disorders associated with limited or excessive intake of various minerals, reviews the methods of diagnosis and prevention of deficiencies, and summarizes the mineral requirements of different classes of livestock. He treats the complex subject of trace mineral interrelationships in a most understandable fashion. He points out that simple mineral deficiencies or toxicities due to an inadequate or excessive intake of a single mineral are comparatively rare and that such conditions are generally accentuated by the extent to which other components are present in or absent from the complete diet.

Professor Underwood explains factors which affect the mineral composition of plants including the influence of fertilizers, various soil treatments, and different environmental conditions. He describes the availability and utilization of various minerals while indicating that much of our knowledge in this field remains somewhat fragmentary.

Text material is efficiently organized; specific points of interest are easily located. Chapters dealing with both major and minor elements include subject matter relating to the occurrence and manifestation of deficiencies, their detection and diagnosis, and the prevention and control of such deficiencies. Exclusive chapters are devoted to metabolic diseases involving calcium and magnesium and to nutritional disorders involving copper and molybdenum, selenium, and fluoride. Because of the fundamental approach, individuals with less training in the biochemical and physiological aspects of nutrition are able to apprehend the rather complex nature of the subject. Available data on nutrition of livestock is condensed into a concise, useful volume which should find wide application among students, teachers, research and extension workers as well as progressive stockmen throughout the world.

In the final chapter considerable attention is given to problems of feed formulation and mineral supplementation aimed at insuring adequate intake by animals without deleterious excess or economic waste. Professor Underwood is a firm believer in the use of mineral supplementation only when the mineral requirements of animals cannot be met through careful selection and combination of available feeds. He is opposed to "shotgun" mixtures designed for a wide variety of environmental and feeding conditions.

Through the application of basic concepts and principles presented in this text much can be accomplished towards alleviating mineral malnutrition, which retards livestock production over large areas of the world.—Joe D. Wallace. Oregon State University, Squaw Butte Experiment Station, Burns, Oregon.

New Publications

QUARTER HORSES, A STORY OF TWO CENTURIES traces the European origin and the development of the Quarter Horse in the United States. The author, Robert Moorman Denhardt, says, "There are no other books covering the history of the Quarter Horse." The University of Oklahoma Press, Norman, Oklahoma (1967), $5.95, 35 illus., 192 p.

Three new publications were received from the Soil Science Society of America. SELECTED PAPERS IN SOIL FORMATION & CLASSIFICATION assembles under one cover some of the best papers published in the last ten years or so. Thirty-four papers, arranged in four parts, are reprinted for a handy reference to source material dealing with modern concepts in soil formation and classification. If this "experiment" in publication of technical papers is successful, others surely will follow. SSSA Special Publication Series no. 1, Soil Science Society of America, 677 South Segoe Road, Madison, Wisconsin 53711 (1967), $3.00, 428 p.

SSSA Special Publication No. 2, SOIL TESTING & PLANT ANALYSIS, is published in two parts, which include symposia papers. SOIL TESTING, part 1 (1967), $2.00, 114 p., includes a nicely coordinated series of review papers that will be greatly appreciated. PLANT ANALYSIS, part 2 (1967), $2.00, 157 p., however, includes a series of rather specific topics. The papers are good, but the broader perspective of forage-plant analysis is obviously lacking. Soil Science Society of America, ibid.

From the Agronomy Monograph Series we now have no. 12, SOIL ACIDITY AND LIMING, edited by R. W. Pearson and Fred Adams. The first three chapters are devoted to: The