

ALASKA LEGISLATURE COMMITTEE FILES 1993-1994 8672

8084 HOUSE RESOURCES

SB46 WORK DRAFT

Page 3

Adds definitions of "domesticated game animal," "game farming" and "lawfully owned."

Section 5.

No changes.

Section 6.

Technical: "captive" changed to "domesticated."

Also, in the work draft the facilities-adequate-to-prevent-injury requirement was transferred from DEC to DNR since DNR currently regulates fencing.

Section 7.

Refers back to definitions of "domesticated game animal" and "game farming" that appear in AS 03.05.100.

Section 8.

No changes (except technical: "musk ox, moose" changed to "domesticated game animals").

Section 9.

No changes (except technical: "musk ox, moose" changed to "domesticated game animals").

Section 10.

Refers back to definition of "domesticated game animal" that appears in AS 03.05.100.

Sections 11 and 12.

Removes ADF&G's authority to require and charge for a game farming license.

SB46 WORK DRAFT

Page 4

Section 13.

Changes definition of "domestic mammals" in AS 16.05.940 to say "domesticated game animals" rather than "musk oxen, bison, etc."

Section 14.

Adds caribou to list of game that may be transferred to private ownership for game farming. (*The Senate Finance CS added only moose.*)

Transfers ADF&G authority to DNR to require an applicant to prove intent to raise and breed and to show proof of possession of adequate facilities.

Gives ADF&G authority to issue and charge for permits for persons to obtain surplus game animals for game farming purposes.

Section 15.

Subsection (b) is new language which requires ADF&G to consider giving orphaned, abandoned, or other "problem" calves to game farmers.

Currently the department, in certain cases, gives these animals to zoos and/or wildlife parks in and outside Alaska at no charge.

Subsection (c) states that once an animal has been legally obtained, a game farming license or permit is not required from Fish & Game in order to possess the animal.

Subsection (d) states that wild animals may not be captured from the wild without a permit from ADF&G. It also states that a license or permit is not required from ADF&G in order to import, export or possess animals for game farming.

Section 16.

Repealers.

SB46 WORK DRAFT

Page 5

16.40.020, which legalizes the sale of farmed game meat, is transferred from the Fish & Game statute (AS 16) to the Agriculture statute (AS 03).

16.40.050, the elk farming statute, has been weaved into the game farming statutes that would become law if SB 46 passes. Essentially, in the work draft, nothing from the elk farming statute would be diminished or deleted from law, only transferred to places in the statutes.

FISCAL NOTE

STATE OF ALASKA
1994 LEGISLATIVE SESSION

BILL NO. CSSB 46(FIN)

Revision Date: 12/17/93
 Title: An Act relating to moose farming and relating to game farming
 Sponsor: Senator Miller
 Requestor: House Resources

Dept. Affected: Fish and Game
 BRU: Wildlife Conservation
 Component: Wildlife Conservation
 COMPONENT SERIAL NO. 0473

Expenditures/Revenues

(Thousands of Dollars)

OPERATING EXPENDITURES	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL EXPENDITURES	0	0	0	0	0	0
CHANGE IN REVENUES ()	0	0	0	0	0	0

FUND SOURCE

(Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1006 GF/MHTIA						
Other						
TOTAL	0	0	0	0	0	0

Estimate of any current year (FY 94) cost: \$ 0.0

POSITIONS

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

ADF&G has no regulatory authority for game farming under CSSB 46(FIN), and therefore we anticipate a zero fiscal note. See attached page for extraordinary costs that cannot be predicted or estimated in advance.

Prepared By: David G. Kelleyhouse, Director *DK*
 Division: Wildlife Conservation
 Approved by Commissioner: *[Signature]*
 Agency: Alaska Department of Fish and Game

Phone: 465-4190
 Date: 12/17/93
 Date: _____

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Under this bill, regulatory authority for moose farming and game farming is under the Departments of Natural Resources and Environmental Conservation. The ADF&G is limited to one-time approval of fencing and recording information received by recipients of moose. Consequently, we do not anticipate additional ordinary operating costs. In the department's view, however, a regulatory effort sufficient to adequately protect Alaska's wildlife resources in the event this bill becomes law would have significant fiscal impacts that should be evident on Fiscal Notes provided by DNR, DEC, and the Division of Fish and Wildlife Protection of DPS.

Under any moose/game farming bill, we anticipate extraordinary but unpredictable costs to the department and state. For example, (1) control of disease: Alberta has spent over \$10 million and destroyed over 2,000 game farm animals in an unsuccessful attempt to control an outbreak of Tb; (2) capturing escaped animals: an unsuccessful effort to prevent escaped game farmed bison in Delta Junction from mixing with the Delta Bison Herd cost the department approximately \$3500 in 1991; (3) predator/prey conflicts: the department periodically has had to respond to demands from livestock ranchers (cattle and bison) on Kodiak Island for control of brown bears.

If this moose/game farming bill were amended to incorporate "recommendations" from the ADF&G *Revised Position Paper*, we would prepare a fiscal note that includes a 12-month, full-time Wildlife Biologist III (58.2/annum beginning in FY95) and associated operating expenditures. This employee would be responsible for coordinating with the state veterinarian, making personal annual inspections of all facilities housing captive moose/game farm animals, issuing and renewing permits, collating and recording reported information from moose/game farmers, keeping abreast of genetic and disease problems identified in other jurisdictions, coordinating and directing all efforts to recover escaped animals and control outbreaks of diseases or parasites in wild game populations.

EXPLANATION OF PROPOSED CHANGES FOR
AMENDMENT

TO: HCS FOR CSSB 46()
(Utermohle WORK DRAFT 3/8/94)

Page 2, lines 15-16:

Delete "and animals subject to an experimental animal husbandry permit under AS 16.40.010"

Animals held under Title 16 permits should be regulated by the commissioner of fish and game--not by DNR; DNR should be responsible for game farming and domestic animals, ADF&G should retain responsibility for animal husbandry permits and game animals.

Page 4, lines 11-12:

Delete "caribou, moose, Sitka black-tailed deer"

Caribou, moose and Sitka black-tailed deer should not be defined as "game farm animals until they have been successfully bred under experimental animal husbandry permits.

Page 5, lines 30-31:

Delete "or to an experimental animal husbandry permit under AS 16.40.010"

Animals held under a Title 16, experimental animal husbandry permit should not be defined as "domestic" (and removed from department and fish and game oversight) until they are actually held under a game farming license.

Page 7, lines 28-29, following "The":

Delete "possession and utilization of animals acquired under this section for commercial purposes and"

Title 3 statutes and regulations adopted under Title 3 should apply only to game farm animals--not to animals held under Title 16 permits or used for commercial purposes other than game farming.

Page 8, line 10:

Delete "and sell the meat from"

Sale of meat from animals held under Title 16 experimental animal husbandry permits is inappropriate and could compromise wildlife enforcement regulations adopted by the Board of Game. At such time as ownership of animals held under these permits is transferred to the permittee under Title 3 game farming licenses, sale will become legal.

Page 8, lines 11-17, following "animals":

Delete ", and may charge a fee to the public for viewing of the animals. The preparation and sale of meat or other products under this subsection for human consumption are subject to AS 03 and regulations adopted under AS 03. Except as otherwise expressly provided in this subsection, the possession of animals for experimental animal husbandry purposes is subject to AS 03 and regulations adopted under AS 03 in the same manner as the possession of game farm animals"

POSITION PAPER

Farming of Big Game Animals in Alaska

Department of Environmental Conservation
Department of Fish and Game
Department of Natural Resources

February 1994

INTRODUCTION

Interest in farming big game animals as alternative livestock is increasing in Alaska. Recent legislation authorized farming of North American elk and a bill currently before the legislature would authorize farming of moose. Alaska needs a comprehensive review of game farming to:

1. formulate a state policy on this issue;
2. recommend legislation to authorize and regulate game farming, and;
3. develop fair and effective regulations that will protect the domestic and game farm industries, Alaska's wildlife resources and provide a climate for game farming to grow and prosper.

Representatives from the Departments of Environmental Conservation, Fish and Game and Natural Resources held a series of meetings to discuss game farming. These discussions resulted in this position

paper that outlines the state's policies on game farming. All three departments endorse these recommendations. A representative of the game farm industry in Alaska has also reviewed and endorsed this position paper.

STATUS OF GAME FARMING IN ALASKA

Current laws in Alaska allow four species of big game to be farmed. They are elk, reindeer, bison and muskoxen. Reindeer, bison and muskoxen are defined as domestic animals when privately owned. No permits or licenses are required to farm these animals. North American elk may be privately owned for the purposes of farming under a game mammal farming license issued by the Department of Fish and Game. Private ownership of all other big game species is prohibited by Fish and Game regulations adopted by the Board of Game. The only exception to this is for animals held by zoological parks. Zoological parks own some animals in their possession and retain others owned by the state under educational permits.

There is one muskoxen farm in Alaska. This farm is located near Palmer and has about 50 animals. The animals are owned by "OOMINGMAK", a muskox producers co-operative. This co-operative provides wool to about 200 knitters in many villages in Alaska for production of woolen products.

There are about 45,000 reindeer in Alaska, most are located on the Seward Peninsula in Western Alaska, Nunivak Island and Umnak Island. The federal "Reindeer Act" of 1937 limits ownership of reindeer in Alaska to Alaska Natives. This Act defines reindeer as "reindeer and such caribou as have been introduced into animal husbandry..." Reindeer herding is a growing industry in Alaska. Products include antlers, meat and breeding stock.

There are several small herds of privately owned plains bison in Alaska. The largest farms are near Kodiak, Nenana and Delta. The total number of farmed plains bison in Alaska is about 200, the largest herd has 70 animals.

Alaska has two licensed elk (also called wapiti) farms. The largest, near Soldotna, has been raising elk since 1989 and has about 70 animals. One other farmer near Homer has three elk. Several other people have expressed interest in elk farming and hope to enter into the business in the future. Products from elk farms are antlers, meat and breeding stock.

Current laws and policies allow only the four subspecies of North American elk to be farmed in Alaska. There is interest by some farmers to import red deer for farming. Red deer are a European subspecies of elk. They readily hybridize with the North American subspecies.

Individuals have expressed interest in owning moose for farming. Native and non-Native Alaskans have expressed an interest in owning caribou although the ownership of reindeer and caribou (by definition) is restricted to Native Alaskans by federal law. At this time, no one has expressed interest to the Division of Agriculture or Wildlife Conservation in farming any other species of big game in Alaska.

FUTURE OF BIG GAME FARMING IN ALASKA

Needs of Game Farm Industry

Game farming in Alaska is in its infancy. There is great potential for game farming to grow into a viable, substantial industry in the future. For growth to occur the industry requires consistent state policies across departments, stability in state laws and fair and effective regulations.

Raising game animals successfully under domestic conditions requires knowledgeable and experienced herdsman. There is a need for game farm research provided by the University of Alaska to facilitate effective methods for raising game species as agricultural livestock and provide education and program delivery by the Cooperative Extension Service to promote the game farming industry.

Role of State Government

State agencies must formulate state policies and regulations that provide opportunities for the game farming industry to expand while protecting the domestic livestock industry and the wildlife resources from undue risk. Potential risks to public health and to our wildlife resources can be avoided or minimized by effective regulations.

RECOMMENDED POLICIES

- Big game species that may be farmed in Alaska are:
 - Muskoxen, Ovibos moschatus
 - Plains bison, Bison bison bison
 - Wood bison, Bison bison athabascae
 - Reindeer, Rangifer tarandus tarandus
 - Rocky Mountain elk, Cervus elaphus nelsoni
 - Roosevelt elk, Cervus elaphus roosevelti
 - Tule elk, Cervus elaphus nannodes
 - Manitoba Elk, Cervus elaphus manitobensis

Other species of big game animals can be added to this list under regulations that will be adopted by the Department of Natural Resources. These regulations will provide a procedure

and criteria for review of proposed inclusions to the list of game species that may be farmed. Concurrence of the Commissioners of Natural Resources and Fish and Game will be required before a species can be added or deleted from the list.

Farming of moose as a commercial enterprise has not been shown to be economically feasible. While it is possible to maintain moose in captivity with special feed and proper fencing the behavior of moose is not conducive to a farming operation. Therefore, they should not be included as a species that may be farmed in Alaska. Some individuals desire to own moose for a variety of purposes other than farming. We suggest the legislature create a new permit called an experimental animal husbandry permit. Under regulations promulgated by the Department of Fish and Game individuals would be allowed to hold moose and caribou in captivity. The state would retain ownership of these animals. Roadside attractions that exploit moose will not be allowed. Moose may not be used as pets under current laws.

The Department of Environmental Conservation will be the agency with responsibility and authority for animal health issues. Regulations dealing with import, export and quarantine requirements and disease testing, will be promulgated by the Commissioner of the Department of

Environmental Conservation with advice from the Departments of Fish and Game and Natural Resources.

The Department of Natural Resources will be the agency with responsibility and authority to promulgate regulations related to all other aspects of game farming. These regulations will include permanent identification of animals, records of transfer of ownership, fencing requirements and adding species to the list of game animals that may be farmed. The Departments of Fish and Game and Environmental Conservation will provide advice on these regulations.

The Departments of Natural Resources, Environmental Conservation and Fish and Game will develop a Memorandum of Agreement concerning regulation of the game farming industry. The MOA will delineate areas of responsibility and an enforcement policy.

RECOMMENDED LEGISLATION

SB 46 should be amended to authorize game farming of reindeer, plains and wood bison, muskoxen and elk under regulation of Department of Natural Resources. The legislation should authorize the Department of Natural Resources to develop regulations that establish a procedure for new species to be added to the list of species that may be farmed in Alaska.

During the 1995 legislative session, legislation should be passed clarifying when wildlife can be surplused for use as game farm animals. This legislation should authorize the Department of Fish and Game to develop regulations which establish a process for surplusing wildlife for use as game farm animals. The issue of adding moose, caribou and other species to the list of game species that may be farmed should be addressed after DNR and DFG have such regulations in place.

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REGULATION OF GAME FARMING IN STATES AND PROVINCES

Prepared by Department of Fish and Game
February 1994

Most states and provinces allow farming of game species. The species allowed to be farmed and the regulations governing the industry vary from state to state. Authority to regulate game farming usually resides in either the Department of Fish and Game or the Department of Agriculture. In some jurisdictions (i.e., Colorado, Idaho, Alberta and Louisiana) these agencies share authority for regulations.

During the past 5 years several states, especially western states, have revised their statutes and/or regulations related to game farming. The reasons for these revisions are:

1. interest in game farming, especially elk farming, has increased greatly and more people are entering the industry;
2. importation of red deer from New Zealand created concerns about hybridization with elk; and
3. occurrence of tuberculosis in elk in Alberta increased concern about game farm animals spreading disease to domestic livestock.

New regulations in most states follow recommendations made at a Game Farming Symposium attended by state, provincial and federal veterinarians; and agriculture and wildlife officials. The symposium was held in Idaho in 1991. These regulations require disease testing, permanent animal identification and records to track animal movements.

Status of game farming regulations from several jurisdictions are summarized below. We do not have information from other states.

California: currently has a moratorium on importation of any new non-domestic stock pending development of new disease testing protocols.

Colorado: new regulations written in 1993. Allow farming of Rocky Mountain elk, fallow deer and mule deer. Require disease testing, permanent animal marking, and have fencing standards--red deer and moose are prohibited.

Idaho: currently revising regulations to follow symposium recommendations. Restrict species to Rocky Mountain elk, white-tailed deer, mule deer, fallow deer and reindeer--red deer and moose are prohibited.

- Louisiana:** new statutes passed in 1992, in process of developing regulations to require disease testing, permanent identification through implanted microchip, fencing standards. Allows farming of elk, exotic deer and antelope.
- Montana:** adopted more restrictive regulations in 1992. Allow elk, but prohibit red deer and moose farming.
- Nevada:** new state law (1993) restricts game farming to elk, fallow deer, and reindeer--red deer and moose are prohibited. Regulations following guidelines from Idaho symposium are being drafted.
- New York:** allow farming of several deer species, only elk and fallow deer farmed commercially. A case of TB in a fallow deer resulted in the loss of New York state's certified TB-free status in 1993.
- Oregon:** currently revising all regulations concerning farming of deer species.
- Utah:** new law in 1992 prohibits private ownership of all native and nonnative wildlife species except bison and fallow deer. Game farming is prohibited by statute.
- Washington:** In 1992 passed regulations prohibiting importation and propagation of native deer, elk, moose and caribou--currently in litigation.
- Alberta:** In 1991 passed new law called Comprehensive Livestock Industry Diversification Act. Law licenses game farms, allows farming of elk, deer and moose, prohibits all exotics, including red deer, requires permanent marking and registration. Dr. Terry Church, Director of the Alberta Animal Industry Division wrote to the Alaska Division of Agriculture (October 5, 1993) about game farming. He said, "Moose are raised mostly out of curiosity. They are difficult to manage. They require a browse diet and farmers have not been able to justify the costs of fences for the amount of moose a given pasture will produce. Elk consume the same species of forage a moose does plus a lot more. With elk on a farm, there is really little reason to keep moose. I can't imagine a situation where they will ever be economical."
- Yukon Territory:** Passed new regulations in 1992 allowing farming of elk and prohibiting red deer and moose.

Alaska State Legislature

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SPONSOR STATEMENT

CSSB 46 (FIN) "Moose farming and game farming"

CS Senate Bill 46 (Fin) provides for the development of moose farming in Alaska and is intended to expand Alaska's economic development opportunities.

Surplus moose, if an actual surplus exists at any given time, can be provided by the state to an individual or group to raise and breed in captivity. The bill also legalizes the sale of farm raised moose meat.

Under SB 46, DEC, DNR and Fish & Game are given regulatory authority to ensure the safety and health of animals and handlers, and to provide for adequate start-up and monitoring of moose farming activities. Safeguards have been added to help prevent disease, a major concern of the Department of Fish and Game, and to implement the proper regulatory controls to ensure a healthy, viable game farming industry in Alaska.

Animal husbandry is a priority recommendation of the Agriculture Task Force and was recommended during the Joint House/Senate Economic Task Force Mini-Summit public hearings. CSSB 46(Fin) is also supported by DEC, DNR and the Department of Commerce and Economic Development.

SPONSOR STATEMENT

SUMMARY OF AGENCY AUTHORITY UNDER CSSB 46 (FIN)

DEPARTMENT OF NATURAL RESOURCES:

- 1) conduct promotional work for the game farming industry;
- 2) regulate game farming as it does other livestock (including branding & marking, and the regulation of fencing and facilities)
- 3) require registration of the animals.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION:

- 1) regulate game farming as it does other livestock (including meat inspections and disease prevention & control);
- 2) visit and inspect game farms and to provide advice on breeding and care;
- 3) certify an applicant's ability to prevent disease transmission to other animals, both wild and domestic;
- 4) certify than an applicant has facilities adequate to prevent injury to animals or handlers; and
- 5) require registration of the animals.

DEPARTMENT OF FISH & GAME:

- 1) require disease prevention and safety certification from DEC;
- 2) require tattooing and ear tags for identification;
- 3) require escape proof and entry proof fencing;
- 4) require notification of the birth, death, sale, slaughter or escape;
- 5) require payment for a necropsy after death to determine cause;
- 6) require notification when a wild animal enters a farming facility;
and
- 7) require registration of the animals.

FISCAL NOTE

BILL NO. CSSB 46(FIN)

STATE OF ALASKA
1993 LEGISLATIVE SESSION

Revision Date: 3/26/93

Department Affected: Fish and Game

Title: An Act relating to moose farming and relating to game farming.

BRU: Wildlife Conservation

Component: Wildlife Conservation

Sponsor: Senator Miller

Requestor: House Resources

COMPONENT SERIAL NO. 0473

EXPENDITURES/REVENUES:

(Thousands of Dollars)

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
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REVENUE FUND SOURCE:	0	0	0	0	0	0
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FUNDING:

(Thousands of Dollars)

1002 Federal Receipts	0	0	0	0	0	0
1003 GF Match	0	0	0	0	0	0
1004 GF	0	0	0	0	0	0
1005 GF/Program Receipts	0	0	0	0	0	0
1006 GF/MHTIA	0	0	0	0	0	0
Other	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year (FY93) impact: \$ 0

ANALYSIS: ADF&G has no regulatory authority for game farming under CSSB 46(FIN) and therefore we anticipate a zero fiscal note. See attached page for extraordinary costs that cannot be predicted or estimated in advance.

Prepared By: David G. Kelleyhouse *CDK*

Phone: 465-4190

Division: Wildlife Conservation

Date: March 26, 1993

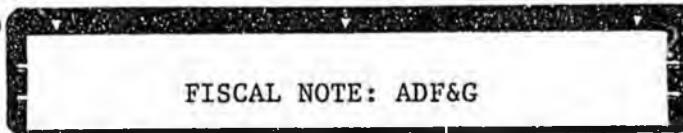
Approved by Commissioner: *[Signature]*

Agency: Department of Fish and Game

Date: 3/31/93

PREPARER TO

TIVE OFFICE



Under this bill, regulatory authority for moose farming and game farming is under the Departments of Natural Resources and Environmental Conservation. The ADF&G is limited to one-time approval of fencing and recording information received by recipients of moose. Consequently, we do not anticipate additional ordinary operating costs. In the department's view, however, a regulatory effort sufficient to adequately protect Alaska's wildlife resources in the event this bill becomes law would have significant fiscal impacts that should be evident on Fiscal Notes provided by DNR, DEC, and the Division of Fish and Wildlife Protection of DPS.

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If this moose/game farming bill were amended to incorporate "recommendations" from the ADF&G *Revised Position Paper*, we would prepare a fiscal note that includes a 12-month, full-time Wildlife Biologist III and associated operating expenditures. This employee would be responsible for coordinating with the state veterinarian, making personal annual inspections of all facilities housing captive moose/game farm animals, issuing and renewing permits, collating and recording reported information from moose/game farmers, keeping abreast of genetic and disease problems identified in other jurisdictions, coordinating and directing all efforts to recover escaped animals and control outbreaks of diseases or parasites in wild game populations.

FISCAL NOTE

STATE OF ALASKA 1993 LEGISLATIVE SESSION

BELL NO. SB46

Revision Date Original Department Affected: Natural Resources

Title: "An act authorizing moose farming" BRU: Agricultural Development

Components: Agricultural Development

Sponsor: Senators Miller, Frank, Pearce

Requestor: Senators Miller, Frank, Pearce Component Serial No. 455

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES						
TRAVEL	0.0	1.0	2.0	5.0	10.0	10.0
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND&STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	1.0	2.0	5.0	10.0	10.0

CAPITAL						
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REVENUE fund source:						
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FUNDING: (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	0.0	1.0	2.0	5.0	10.0	10.0
1005 GF/Program Receipts						
1006 GF/MHTIA						
Other						
TOTAL	0.0	1.0	2.0	5.0	10.0	10.0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year (FY93) impact: \$ No fiscal impact anticipated

ANALYSIS: (Attach a separate page if necessary)
 The Department of Fish & Game currently has authority to declare buffalo and musk oxen surplus and allow for their private use. This bill would allow moose to be declared surplus and thus allow the raising and breeding of moose as domestic stock for commercial purposes, or for scientific and educational purposes. The bill will also authorize the sale of moose meat.

Prepared by: John Cramer, Director Phone: 745-7200
 Division: Agricultural Development Date: 17-Feb-93
 Approved by Commissioner: Glenn A. Olds *Glenn A. Olds* Date: 17-Feb-93
 Agency: Department of Natural Resources

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For further information, contact _____

FISCAL NOTE

STATE OF ALASKA
1993 LEGISLATIVE SESSION

BILL NO. CSSB46 (FIN)

Revision Date: March 3, 1993
 Title: An Act Authorizing Moose Farming
 Sponsor: Senator Miller
 Requestor: Senate Finance

Department Affected: Environmental Conservation
 BRU: Environmental Health
 Component: Animal & Dairy

COMPONENT SERIAL NO. 647

EXPENDITURES/REVENUES:

(Thousands of Dollars)

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
TRAVEL	0.0	0.0	0.0	0.0	0.0	0.0
CONTRACTUAL	0.0	0.0	0.0	0.0	0.0	0.0
SUPPLIES	0.0	0.0	0.0	0.0	0.0	0.0
EQUIPMENT	0.0	0.0	0.0	0.0	0.0	0.0
LAND&STRUCTURES	0.0	0.0	0.0	0.0	0.0	0.0
GRANTS, CLAIMS	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*

CAPITAL						
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REVENUE FUND SOURCE:						
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FUNDING:

1002 FEDERAL RECEIPTS	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF MATCH	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/PROGRAM RECPT	0.0	0.0	0.0	0.0	0.0	0.0
1006 GF/MHTIA	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

POSITIONS: NONE

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year (FY93) impact: 5 NONE

ANALYSIS: (Attach a separate page if necessary.)
 *Zero fiscal impact providing number of animals farmed is limited to 1000 or less.

Prepared by: Kit Ballentine
 Division: Environmental Health

Phone: 465-5280
 Date: 3/1/93

Approved by Commissioner: [Signature]
 Agency: Department of Environmental Conservation

Date: 3/1/93

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

Under this bill, regulatory authority for moose farming and game farming is under the Departments of Natural Resources and Environmental Conservation. The ADF&G is limited to one-time approval of fencing and recording information received by recipients of moose. Consequently, we do not anticipate additional ordinary operating costs. In the department's view, however, a regulatory effort sufficient to adequately protect Alaska's wildlife resources in the event this bill becomes law would have significant fiscal impacts that should be evident on Fiscal Notes provided by DNR, DEC, and the Division of Fish and Wildlife Protection of DPS.

Under any game farming bill, we anticipate extraordinary but unpredictable costs to the department and state. For example, (1) control of disease: Alberta has spent over \$10 million and destroyed over 2,000 game farm animals in an unsuccessful attempt to control an outbreak of Tb; (2) capturing escaped animals: an unsuccessful effort to prevent escaped game farmed bison in Delta Junction from mixing with the Delta Bison Herd cost the department approximately \$3500 in 1991; (3) predator/prey conflicts: the department periodically has had to respond to demands from livestock ranchers (cattle and bison) on Kodiak Island for control of brown bears.

If the game farming bill were amended to incorporate "recommendations" from the ADF&G *Revised Position Paper*, we would prepare a fiscal note that includes a 12-month, full-time Wildlife Biologist III and associated operating expenditures. This employee would be responsible for coordinating with the state veterinarian, making personal annual inspections of all facilities housing captive game animals (including moose, elk, bison, muskoxen and fur farm animals), issuing and renewing permits, collating and recording reported information from game farmers, keeping abreast of genetic and disease problems identified in other jurisdictions, coordinating and directing all efforts to recover escaped animals and control outbreaks of diseases or parasites in wild game populations.

DIVISION OF LEGAL SERVICES

LEGISLATIVE AFFAIRS AGENCY STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

130 Seward Street, Suite 409
Juneau, Alaska 99801-2105

MEMORANDUM

March 17, 1994

SUBJECT: Draft HCS CSSB 46(); Moose farming and game farming

TO: Representative Pat Carney

FROM: George Utermohle *GU*
Legislative Counsel

This memorandum accompanies the latest draft of HCS CSSB 46() that was requested by Caroline Lombard of your staff. The draft HCS CSSB 46() was drafted in accordance with the instructions provided by your staff.

This memorandum describes those additional technical changes that were made to the bill during the course of preparing the draft HCS CSSB 46().

In section 8 of the bill, the provision relating to opening of a gate of an enclosure where game animals are present (AS 03.30.070(b)) was amended to more accurately describe the person who can give permission to leave open a gate. This provision formerly required that the permission be granted by the owner of the game farm animals. However, since the provision is equally applicable to gates of an enclosure containing animals possessed under an experimental animal husbandry permit (such animals cannot be privately owned), the language of the provision was changed to provide that the permission must be given by the "person who lawfully possesses" the animals. This language would include all situations where the game farm animals are either owned or merely possessed under an experimental animal husbandry permit.

In sections 10, 11, and 15 of the bill, the term "reindeer" is included in the language to be deleted from existing law because reindeer are included in the definition of "game farm animals" under AS 03.05.100. This change removes an unnecessarily redundant reference to "reindeer".

In accordance with the drafting instructions provided by your office, responsibility for the experimental animal husbandry permit is transferred from the Department of Fish and Game to the Department of Natural Resources. The appropriate language is contained in section 4 of the bill as Sec. 03.05.075. This provision was amended to clarify that the animals possessed under the experimental animal husbandry permit

Representative Pat Carney

March 17, 1994

Page 2

remain property of the state. Language contained in the prior version of the bill stated that animals received under the permit remain property of the state while in the possession of the permit holder. This language was amended to delete "while in the possession of the permit holder." This change was made to clarify that the animals remain property of the state, even if they should escape from the possession of the permit holder.

The provision of the bill that prohibits the importation of moose or caribou for commercial or animal husbandry purposes was moved from Title 16 (Fish and Game) to Title 3 (Agriculture and Animals) where most provisions of this bill will be located in the Alaska Statutes. This change seems appropriate given its relationship to the use of game animals for commercial purposes. This provision is now included in sec. 4 of the bill as Sec. 03.05.078.

In sec. 17 of the bill, the provision (subsection (c)) regarding the transfer of animals possessed under an experimental animal husbandry permit to private ownership, has been amended by adding language to specify that the progeny of the animals shall also be transferred to private ownership. This change has been made to address an ambiguity that had been noted in the prior language of this provision.

If I may be of further assistance, please advise.

GU:mi

94-063.mai

Enclosure

Alaska State Legislature

SENATOR

MIKE MILLER

P.O. Box 55094

North Pole, Alaska 99705

(907) 488-0862

Write in Juneau

State Capitol

Juneau, Alaska

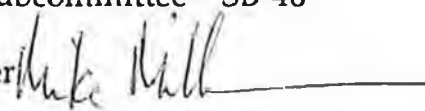
99801-1182

(907) 465-4976

Senate District Q

Senate

To: Representative Pat Carney, Chair
House Resources Subcommittee - SB 46

From: Senator Mike Miller 

Re: SB 46 revisions

Date: March 13, 1994

I would like to make the following recommendations regarding the draft CS for CSSB 46(Fin) version "X."

First, I recommend placing the regulatory authority over the *experimental animal husbandry permit* with the Department of Natural Resources. The three agencies affected by SB 46 (DNR, DEC and ADF&G) have also recommended this approach.

Second, I recommend shortening the duration of the *experimental animal husbandry permit* to two years. The five year provision in version "X" was an arbitrary number chosen by the drafting attorney because a specific time period had not been provided at the time of drafting.

Third, I recommend removing "Sitka black-tailed deer" from the entire bill.

Fourth, I recommend inserting a penalty clause for tampering with game farm fences in a manner that would allow animals to escape or be stolen. Appropriate language is attached that has been reviewed by Bill Ward.

Fifth, I strongly recommend retaining the definition of "surplus" in the bill. The Department of Fish & Game maintains that the existence of surplus animals should be determined by the Game Board. I am wholeheartedly in agreement; however, the Board has yet to deal with the issue, even with respect to the species currently allowed in statute. The Board's opposition is highlighted in its 1993 resolution unanimously rejecting the legalization of moose farming. Even with a statutory definition of "surplus," under version "X" the state still retains discretionary authority over disposal of the animals, maintaining agency flexibility.

Representative Pat Carney
March 13, 1994
Page 2

Sixth, a concern was expressed during the hearing by ADF&G regarding a private individual selling meat from animals owned by the state, i.e. selling state property. Interestingly, the administration has proposed that animals slaughtered while held under the experimental permit would become the private property of the permittee. I would point out that the sale of meat cannot occur until an animal is slaughtered, at which point the animal would become private property (according to the administration's proposal), in which case the owner would not be selling state property.

Inconsistencies of policy aside, if the subcommittee determines that the sale of meat under an experimental permit should not be allowed, then a parallel provision should be included which expressly forbids demonstration of commercial viability as a permit requirement. In other words, one should not have to prove that commercial production of moose is economically viable if one is not allowed to sell the meat.

Finally, I would note that the version "X" work draft of SB 46 is a combination of two proposals, 1) the draft that was placed before the House Resources Committee for consideration last session, and 2) a draft prepared by DNR, ADF&G and DEC. It is based on an Administration Position on Game Farming, which was formulated during the 1993 interim.

I wish to clarify that my office was not notified of the development of this paper until after a consensus was reached and a final document issued. While I appreciate the agencies' efforts to formally address the issue of game farming, I find it unusual that I, and to my knowledge the co-sponsors of SB 46, were not invited to observe or at least notified, to say nothing of being asked to comment or participate. This is not to infer in any way that the agencies' should have developed the consensus based on my direction, but it would seem that making my office aware of the Paper at some time prior to its completion would have been appropriate.

Nonetheless, I believe it was a good faith effort to recommend ways to enhance game farming opportunities. However, the Paper suggests the creation, *through regulation*, of an experimental animal husbandry permit wherein the state would retain legal ownership of the animals provided. Species such as moose, caribou, etc. could potentially be added to an "allowable list" via a petition from the permit holder. The state (DNR and ADF&G) would give the final "yes" or "no" at its discretion. Even if eventually allowed for farming via this process, moose, caribou, etc. would

Representative Pat Carney
March 13, 1994
Page 3

not be placed in statute, only regulation. I agreed to support the experimental permit; however, considering the opposition to moose and caribou farming expressed by ADF&G over approximately the past eight years of legislative attempts to legalize it, I am skeptical of their willingness to move forward with allowing private ownership of game animals through regulation, regardless of the success of permit holders.

What is proposed in HCS CSSB 46 version "X" is a fair compromise that satisfies the wishes of prospective moose and caribou farmers as well as the concerns of the administration. Version "X" contains the following key points:

- 1) a section, *in statute*, outlining the general provisions of the experimental animal husbandry permit;
- 2) retention in state ownership of the animals under the permit, including authority to revoke the permit and take the animals back if the permit terms are not adhered to;
- 3) provisions for a permit holder to request private ownership of the experimental animals, which must be granted by the state, but only if the permittee has complied with the permit;
- 4) prohibition of importation of moose and caribou so as not to allow a person who already holds a general game farming license to bypass the experimental permit process for moose and caribou.

I appreciate the subcommittee's consideration of these comments and recommendations on Senate Bill 46.

PUBLIC AND AGENCY COMMENT

SENATE BILL 46

SB 46 An Act authorizing Moose Farming

The bill is intended to increase Alaskans' options to provide red meat for personal and commercial use.

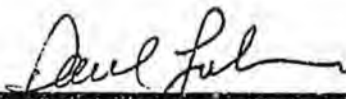
As rural cash sources deplete under declining state budget scenarios, it will become more important that tools exist for citizens to provide or acquire food supplies for their families. Personal use species will acquire more significance in the non-urban economy. The animals envisioned as breeder stock for this use are indigenous Alaskan animals which bear no risk of importing disease or contamination from other geographic areas.

The animals which are determined to be "surplus" would generally be from two sources: orphaned calves which would not be expected to survive on their own; and animals which would have elevated mortality due to natural conditions leading to diminished carrying capacity of the animal's natural habitat.

Over a 4 1/2 year period, an average of 200 animals was killed or mortally wounded along the Alaska Railroad corridor. This statistic omits the extreme winter of 1989-90 when 722 moose were killed between October and April. This condition of natural risk-taking was the result of high snows and limited food supplies as well as limited food supplies except in the rail corridor where young hardwoods had grown. The net impact was a decrease in local animal populations, as well as local hunting opportunities.

We support this legislation in order to give greater opportunity to Alaskans to provide for their families and have the option of selling meat to others. We support the development of appropriate regulations which would put domesticated animals under the supervision of the DNR/Division of Agriculture. This would allow technical assistance and economic monitoring of the moose projects in a similar manner to other private agricultural projects.

The DCED/Division of Tourism is standing by to offer technical assistance to moose farm owners to add a tourism/educational component to their operations. As many visitors are unable to observe these unique animals in the wild, we support the additional economic opportunity that observation facilities will provide to the moose farm operations.



DEPARTMENT OF FISH AND GAME
POSITION PAPER

Bill No: SB 46 (1/14/93)

Sponsor: Senator Miller

Division: Wildlife Conservation

Bill Title: An Act authorizing moose farming.

Department Position: Speculative benefits of this bill are greatly outweighed by serious concerns described below.

Background/Legislative Intent: This bill would amend AS 16.40.010-.020 to allow moose to be raised as domestic animals for commercial purposes and legalize the sale of moose meat. The department would be responsible for determining when a surplus of moose existed that could be made available for disposition to private ownership.

Analysis of Bill/Program Effects: Public ownership of wildlife and prohibiting sale of game meat are foundations of wildlife management in North America. We believe the passage of legislation legalizing these activities would be a major error and detrimental to successful wildlife management in Alaska. These and other concerns, listed below, are currently causing most other western states and provinces to tighten their laws governing private ownership of big game animals.

- (1) Moose are the most highly sought after big game species by hunters, wildlife viewers, and photographers. Approximately 50,000 hunters pursue moose each year, harvesting from 7,000 to 8,000 animals. Thirty-six drawing permit applications are received for each permit available. The demand for moose greatly exceeds supply; surpluses do not exist. *Opinion: Moose*
- (2) Moose farming/ranching will require large acreages. Some proponents of this bill have expressed interest in leasing state agricultural lands. Highly productive state-owned wildlife habitat, currently used by the general public, could be removed from production of wildlife. Conflicts between big game farms and large predators are certain to occur. Populations of wolves, black bears, and grizzly bears will be impacted over a large area surrounding any big game farm.
- (3) Ensuring the general welfare and humane treatment of big game on farms will become a responsibility of the department. Moose are not herd animals and do not tolerate crowding. High densities of animals in confinement will cause behavioral and disease problems with the potential for spreading diseases to wildlife and domestic animals outside the farms.
- (4) Some individuals will use the opportunities provided by this bill to own a few moose as pets, for a hobby, or to promote their tourist businesses. Allowing wildlife to be exploited by roadside attractions diminishes the

value of all wildlife and may lead to legal liability for the state if animals are abused or someone is injured by a moose.

- (5) Allowing sale of moose meat will create serious law enforcement problems. Poachers will have an added economic incentive that they presently lack. Current and proposed levels of wildlife law enforcement are inadequate to cope with this added burden.
- (6) Moose are expensive to maintain in captivity. The high stocking levels proposed for moose farming would require high levels of supplemental feeding. Moose require a special diet and cannot survive on diets that sustain domestic livestock. Moose farming has proven to be uneconomical in Canada where game farms are more common. The Yukon Territory has prohibited the use of moose on game farms. Attempts to domesticate moose in Alberta have been economic failures due to the biology of the animal (moose are unsuitable as beasts of burden, produce small volumes of milk under labor intensive conditions, and are very expensive to feed). To expect moose farming to succeed in Alaska where no infrastructure exists and no market has been established is unrealistic. The state has promoted agricultural projects in the past that resulted in continuing subsidies. The department considers the transfer of publicly owned wildlife to private ownership to be a subsidy.
- (7) Alaska's wildlife resources generate hundreds of millions of dollars annually through tourism, guiding, hunting, and subsistence. Tourists list wildlife viewing as their primary reason for visiting Alaska. This experience will be diminished if tourists observe wildlife at roadside attractions and game farms.

(Please refer to the department briefing paper, *Farming of Big Game Animals*, for additional information.)

Commissioner's Signature Pan Samuella by G.B. Date 1/28/93

Alaska State Legislature

MIKE MILLER

66094

Palmer, Alaska 99718

907/451-2200

State Capitol



Senate

February 19, 1993

Berton Gore, DVM
State Veterinarian
Department of Environmental Conservation
Division of Environmental Health
Meat/Poultry Inspection Section
500 S. Alaska, Suite A
Palmer, AK 99645-6399

Dear Dr. Gore:

I have sponsored legislation (Senate Bill 46) that would provide the Department of Fish & Game with the statutory authority to grant surplus moose to individuals or groups for domestication for either commercial purposes or for scientific and educational purposes. The bill would also legalize the sale of moose meat from farmed moose.

Some concerns have been raised over the possible effects of moose farming. I would like to request your opinion on two of these issues based on your personal research, experience, and professional knowledge as the state veterinarian.

1)"High densities of animals in confinement will cause behavioral and disease problems with the potential for spreading diseases to wildlife and domestic animals outside the farms.

Importation and transportation of wildlife species poses the risk of spreading disease to free-ranging populations. Major diseases of concern include bovine tuberculosis (*Mycobacterium bovis*) and bovine brucellosis (*Brucella abortus*) in elk, rangiferine brucellosis (*Brucella suis* type 4) in reindeer, and bluetongue in elk. Bovine tuberculosis and brucellosis are transmissible to humans as well as native wildlife. In Alberta, over \$10 million has been spent in an unsuccessful attempt to control tuberculosis, and at least 30 people have contracted the disease from game farming situations.

Other diseases and parasites potentially present in translocated wildlife include anaplasmosis (*Anaplasma marginale*), meningeal worm

Berton Gore, DVM
February 19, 1993
Page 2

(*Parelaphostrongylus tenuis*), carotid artery worm (*Elaeophora schneideri*), and giant liver flukes (*Fascioloides magna*). Quarantine and inoculation of ranched game can reduce the risk of disease transmission to native wildlife, but these measures will fail when animals escape quarantine, when tests for disease are not foolproof, or when an unethical game farmer attempts to circumvent proper procedures. Introduced parasites and diseases could seriously diminish Alaska's wildlife populations and reduce opportunities for consumptive and nonconsumptive users of these species."

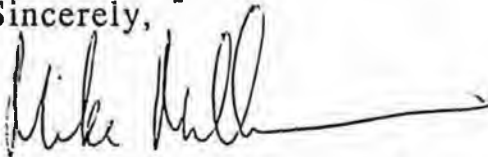
2) "Individuals or groups of animals that are farmed or herded will eventually escape captivity through accidents or inadequate fencing. For example, bison and reindeer have escaped captivity in Alaska, and elk in Alberta and Colorado. In 1992, at least 5 elk with ear tags were killed during the hunting season in Colorado. Overall, a total of 155 exotic free-ranging animals have been killed in Colorado; all escapees from game farms.

Wildlife that escapes captivity poses the risk of contaminating the genetic integrity and fitness of Alaska's wildlife species through hybridization. Native wildlife populations exhibit particular genetic adaptations to their environment, which have caused them to be successful through time. Some domesticated stocks, especially exotic species, may be able to out-compete wild populations. Colorado has spent over \$750,000 in a 3 year program to eliminate genetic contamination from red deer for elk farms in the state."

Please provide any additional information you have that would assist the Legislature in making an informed decision regarding the domestication of moose in Alaska. Feel free to comment on caribou and deer, as well as farmed species in Alaska with which you have experience or knowledge.

Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Miller", with a long horizontal flourish extending to the right.

Senator Mike Miller, Chair
Senate Resources Committee

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF ENVIRONMENTAL HEALTH
OFFICE OF THE STATE VETERINARIAN

500 S. Alaska Street
Palmer, AK 99645
907-745-3236

February 26, 1993

Senator Mike Miller
Alaska State Legislature
State Capital
Juneau, AK 99801-1182

Senator Miller:

The first statement "High densities of animals will cause behavioral and disease problems with the potential for spreading diseases to wildlife and domestic animals outside the farms" interests me. Does this mean the Department of Fish and Game would favor low densities of domestic animals under open range conditions??

Confined animals have difficulty transmitting disease to wildlife or other animals if there is no contact. Disease could only be transmitted from confined animals to others using a vector or intermediate host. To date I am not aware of any vectors, i.e. flies, ticks, or snails, in Alaska which have been incriminated in disease transmission in livestock. To be correct one must add that canines and felines do get tapeworms from shrews, rabbits and some fleas.

Therefore the chance of disease transmission without contact or vectors appears remote.

To address the specific diseases I would like to start with Mycobacterium bovis or Tuberculosis (TB) Canada introduced TB into their elk farms when they (Agriculture Canada and USDA) used the caudal fold intra dermal test. To find the infected elk they switched to the single cervical intra dermal test. The reactors were condemned, killed, and an indemnity was paid based on breeding value as opposed to slaughter value. Hence the high indemnity cost.

To prevent the introduction of TB, Alaska has taken the position that all imported elk shall have a negative TB test using the single cervical test and originate from a herd which has had a negative herd test within the last twelve months using the single cervical method.

Bovine brucellosis (*Brucella abortus*) can occur in elk. To prevent the introduction of this disease, elk for importation must test negative for brucellosis and originate from a herd which has had a negative herd test within the last twelve months.

Rangiferine brucellosis (*Brucella suis* type 4) is a problem because it currently exists throughout the state of Alaska in numerous species of animals.

Senator Miller
February 25, 1993
Page 2

Everyone knows it occurs in reindeer but, according to Dr. Zarnke of Alaska Fish & Game in his research report, "Serologic Survey of Alaska Wildlife for Microbial Pathogens," the disease is found in many species in many areas of Alaska. For example:

1. Grizzly Bear - Admiralty I, Kodiak I, Becharof, Noatak, Units 13, 26C, 26A, and 20.
2. Wolves - Denali Park and ANWAR.
3. Moose - Unit 13.
4. Musk Ox - Nunivak Island.
5. Caribou - Nelchina, Porcupine, Central Arctic and western Arctic herds.

My experience has demonstrated with the William's herd that total confinement combined with test and slaughter procedures can eliminate brucellosis from herds.

Research completed but not yet published by UAF and Agriculture Canada, has shown that healthy, pregnant cows and bison infected with B. suis 4 ran a transient temperature and titer, but did not abort. Since it doesn't cause pathology in cattle or bison; can be eradicated with confinement using test and slaughter procedures; and appears to be endemic in the state in several species; is it really the dread disease of the North???

Blue tongue in elk can be fatal as with other domestic species. The Blue tongue virus is transmitted by a biting gnat. The gnat is found in the lower 48 states and occasionally as far north as the Okanagan Valley in Southern British Columbia. Without that gnat there is no natural transmission. Additionally, all livestock and elk must have a negative blue tongue test prior to entering Alaska. Once again, in Dr. Zarnke's publication, he states he has found serologic evidence of Blue tongue (BT) or Enzootic Hemorrhagic Disease (EHD) already in Alaska, i.e.:

- a. Elk - EHD - Kodiak
- b. Dall Sheep - BT - Unit 20A
- c. Caribou - BT - Mulchatna, Porcupine Herds
- d. Caribou - EHD - Western Arctic Herd

Regarding Anaplasmosis, the textbook "Veterinary Medicine", by Blood, Radostits & Henderson, 6th ed., states:

"Deer can become infected and act as reservoirs of infection for cattle. There is little point in establishing anaplasmosis-free herds when cattle share pasture with roaming deer. American bison (Bison bison) appear to be naturally resistant to infection."

Anaplasmosis is spread by ticks primarily, and occasionally by biting flies and eye gnats.

Senator Miller
February 25, 1993
Page 3

The referenced textbook also states that, "Introduction of the disease into areas by carrier animals can be prevented by use of the C-F or the capillary tube agglutination test."

There is a vaccine available and the disease responds to treatment with tetracyclines.

One must consider that Canada is recognized by USDA as being free of anaplasmosis. Could it be that the vectors do not survive in the cold?

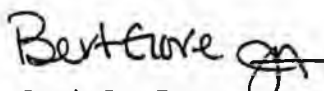
The meningeal worm is primarily a parasite of white tail deer causing little or no pathology in them. It can be fatal for elk and moose however. The worm requires an intermediate host (a snail) before it can infect another animal. Since the white tail and moose share common territory in Maine, Quebec, and Ontario, is it possible that the snail cannot survive in Northern latitudes?

The carotid artery worm is a normal parasite of deer in the mountains of southwest U.S. and the western states. It's primary pathology is to domestic sheep where it causes chronic debilitating skin lesions.

In the true hosts (deer, wapiti and moose) the giant liver fluke is well tolerated. Very little pathology is present. In cattle, however, it causes large granulomatous lesions in the liver. The fluke has an interesting life cycle and requires a snail as an intermediate host. The fluke egg leaves the host in the feces. It must hatch in water at 70° - 86°F in 21-30 days and within 24 hours the larva must penetrate a snail. Does our summer water temperature reach 70° - 86°F for 21-30 consecutive days? Is this a disease threat?

One can argue the pros and cons of importing game animals into Alaska and the potential for disease transmission escapement and hybridization. There is however, an alternative which I would propose and strongly support...the game farming of indigenous species such as Caribou, Musk Ox, Dall sheep, Moose, Sitka deer and Mountain Goats. The research and work already completed by UAF in Reindeer and Musk Ox; Fish and Game's Moose Research Station; and, my experience with eliminating brucellosis in William's Reindeer; would provide a solid foundation for the farming of indigenous species.

Sincerely,



Bert A. Gore
State Veterinarian

BG/da

BILL NO: CSSB 46(FIN)

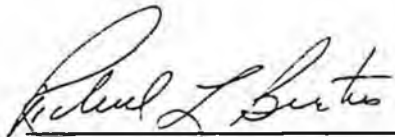
DATE: March 4, 1993

TITLE: "An Act relating to moose farming and relating to game farming"

CONTACT: C.E. Swackhammer
Deputy Commissioner
465-4322

Passage of CSSB 46(FIN) would amend AS 16.40.010 and AS 16.40.020 to allow moose to be raised and bred as domestic stock by private individuals, groups, associations, partnerships, or corporations for commercial purposes or for scientific and educational purposes. Passage of the bill would also allow the meat of these animals, or their offspring, to be sold.

To authorize moose farming and the commercial sale of moose meat would complicate the Department's ability to enforce laws prohibiting the illegal sale, or black marketing, of moose meat from animals taken in the field. The Department would have no way of monitoring the moose meat that is being offered for sale to ascertain if it had entered the market from a moose farm or had been taken as a big game animal in the field. The state's enforcement of the laws and regulations designed to manage and protect its moose population would be jeopardized.



Richard L. Burton
Commissioner



Future of Agriculture Task Force

We submit the Future of Agriculture Task Force's final report in order that this basic resource, enjoyed by every Alaskan every day, can be developed in the best interests of all.

In the past six months, the task force has held thirteen public meetings statewide. Input was sought from every sector of the agricultural community. Members of the task force included men from a broad spectrum: Co-Chairmen Lt. Governor Jack Coghill, DNR Commissioner Harold Heinze; Bob Baer and Mark Kulstad, both in Real Estate in Anchorage; Jim Carter, homesteader from Willow; Jim Drew, Dean of the School of Agriculture and Land Resource Management, University of Alaska Fairbanks; Herb Eckman, owner of Alaska Sausage, Anchorage; Bob Havemeister, second generation Colony dairyman, Palmer; Paul Huppert, owner, Palmer Produce, Palmer; Mike Schultz, grain, hay and grass seed producer, Delta Junction; Ron Sexton, owner, Trinity Greenhouses from Soldotna; and David Wright, an organic grower of vegetables, Harmony Acres of Palmer.

Meetings were held in Palmer, Anchorage, Glennallen, Trapper Creek, Kenny Lake, Kodiak, Ninilchik, Delta Junction, Fairbanks and Juneau.

Governor Hickel asked the task force to examine Alaska's agricultural successes and make realistic recommendations for future state involvement. The following eleven points are submitted to Governor Hickel for implementation into a healthy state agricultural policy.

We thank Governor Hickel for the opportunity to study and serve and hope this plan of action will keep the government from repeating the mistakes of prior administrations and build on the successes for the Future of Alaskan Agriculture.

Sincerely,

Lt. Governor Coghill
Mark Kulstad
Herb Eckman
Mike Schultz

Commissioner Heinze
Jim Carter
Bob Havemeister
Ron Sexton

Bob Baer
Jim Drew
Paul Huppert
David Wright

SUMMARY

"Let us never forget that the cultivation of the earth is the most important labor of man. When tillage begins, other arts follow. The farmers, therefore, are the founders of civilization." -Daniel Webster.

The State of Alaska shall establish a positive, solid, forward thinking agricultural policy by establishing a long-term environment suitable for the development of a stable, sustainable agriculture community for Alaskans.

A stable agricultural system includes the people who produce food and fiber, provide financing, carry out processing, transportation, and marketing, and conduct applied research and technology transfer for agriculture. Each of these links must be strong for Alaska's agriculture to provide opportunities that contribute to the economy of the State. The success in developing a quality state policy for agriculture lies in establishing the essential element of continuity. To this end, the Alaska Department of Natural Resources, Division of Agriculture, will prepare an eight-year plan to strengthen and develop these important links.

The State of Alaska's agricultural policy should:

1. Provide greater consumer availability of quality Alaskan grown products in the marketplace through inspection, certification, labeling, marketing, and education programs.
- * 2. Support unrestricted domestic breeding and raising of all animals, including game species.
3. Support the movement of agricultural materials and products through a farm-to-market road priority and an agricultural discount on the state ferry system.
4. Continue the state's investment in agricultural science and technology to protect and enhance the quality of Alaskan soils, seeds, plants, produce, animals, and other agricultural products; and the necessary knowledge transfer.
5. Facilitate the development and use of agriculture in conjunction with other Alaskan resource uses and needs (i.e., fish meal, forestry).
6. Assure the availability of financing sources for agricultural operations that are financially viable.
7. Make state land available for agriculture under a variety of provisions including fee-simple title with fair market value purchase or homestead credits.
8. Continue to make agricultural land available in a range of parcel sizes throughout the state.

9. Make grazing leases available through the Division of Agriculture for up to a 30 year term with contraction at least every ten years to the area developed and utilized.
10. Preserve the long-term availability of agriculture land by the creation of a 500,000 acre agricultural land bank to be managed and administered by the Division of Agriculture.
11. Facilitate the formation and operation of cooperative ownership of major agricultural facilities and the development of farmer's markets.

FINANCING

Financing is critical in the development of successful agriculture. In the past, the State of Alaska has provided direct loans to the agricultural community and has experienced a high number of delinquencies and defaults. The State of Alaska should encourage the privatization of the agricultural loan function by encouraging the commercial banking industry to assist in financing short term capital requirements of the individual farmers and ranchers.

As in the development of other resources in underdeveloped regions, the development stages of agriculture involve more financial risk than in established agricultural regions where the needed infrastructure is in place. The state should assist banks in setting up controlled loan programs which could be guaranteed through the Alaska Industrial Development and Export Authority.

In addition, the state should consider divesting the Agricultural Loan Fund of the existing portfolio of performing agricultural loans, freeing up between \$6 to \$9 million in capital through selling these loans to individual private financial institutions. This would save the State of Alaska from the expensive role of servicing the loan portfolio.

LAND

Successful agriculture requires a suitable land base. Consequently, agricultural land must be made available for sale or lease throughout the state. Fee simple land should be made available with an agriculture covenant when special price and conditions are offered under agriculture uses. The Division of Agriculture will administer an agricultural land bank of 500,000 acres to ensure the future availability of agricultural land for transfer to farmers. Agricultural land will be made available under a variety of provisions including fee simple title. Land sales will be based on fair market value and carried out through direct sale or a system involving homestead credits.

* GRAZING

Alaska's agriculture should include the unrestricted domestic breeding and raising of all animals, including game species. Grazing leases administered by the Division of Agriculture will be made available for up to thirty years with provisions for review of grazing use every ten years. Leases not actively maintained for this purpose will be made available for lease to other livestock producers.

TRANSPORTATION

Transportation is an essential link in an agricultural system, and includes coordination of several levels of transport. Favorable rates throughout the transportation systems are necessary for Alaskan agricultural products to compete in the marketplace. This involves a rate preference for Alaskan agricultural products carried on state-owned railroad and ferry systems, provisions for favorable trucking rates, licensing, and the construction and maintenance of farm-to-market roads.

PROCESSING

Processing is essential to market agricultural commodities and to provide value-added products for consumers. When necessary, facilities for cost-effective processing will be provided by the State until levels of production make it possible to shift these operations to private individuals, corporations, or cooperatives.

MARKETING

State assistance will be provided to establish cooperatives when these entities are deemed appropriate and the State will encourage the development of farmers markets as direct consumer outlets for food and fiber produced in Alaska. A marketing entity could be developed similar to the Alaska Seafood Marketing Institute for Alaskan agricultural products.

QUALITY CONTROL

The quality of Alaskan grown products will be ensured through inspection, certification, and labeling. Agriculturally related inspection (formerly administered by the Division of Agriculture) and seafood inspection should be transferred from the Department of Environmental Conservation to USDA qualified inspectors at the Division of Agriculture to correspond with the administration of inspection in other states.

In addition, promotional and informational programs such as the Alaskan Grown program will be continued within the Division. These programs are essential links in increasing the market share of agricultural products produced and consumed in Alaska.

RESEARCH & TECHNOLOGY TRANSFER

Results of investments in agricultural research and technology transfer provide an essential link for all segments of a sustainable agricultural system. Support for agricultural research and technology transfer will be provided by the State through the Agriculture and Forest Experiment Station and the Cooperative Extension Service to protect Alaska's soil and water resources, and to enhance the quality of seeds, plants, produce, animals, and other agricultural products grown in Alaska. In addition, the State will encourage support for this work from the Cooperative State Research Service, the Agricultural Research Service, and Forest Service Research, USDA, through cooperative, integrated programs.

CONCLUSION

An efficient agricultural system involves small farms, family farms, greenhouse production, domestic red meat, natural animal farming, larger grain farming and other enterprises as well as the multiple use of infrastructure for processing, transporting, and marketing a variety of commodities.

The State of Alaska should let the farmer farm. Agriculture should not be directly managed by the state but supported and encouraged through technological advice and expertise. Then Alaska will have a healthy food and fiber industry that will enhance both Alaska's economy and benefit her people.



Ward Farms

P.O. Box 290 • Soldotna, Alaska 99669 • (907) 262-6159 • FAX (907) 262-7276

April 15, 1993

To: House Resources Committee

Re: HCS CSSB 46

"An Act relating to moose farming and relating to game farming"

It is my intention to appear before the committee at 8:00 AM on Monday 19th. to testify on this bill. Please refer to accompanying FACT Sheet for relevant information.

As an individual actively involved in the game farm business, I believe I can provide factual information to assist your deliberation on this legislation. My wife and I have been involved in successful agriculture all our lives. Since 1976 we have been developing a livestock ranch on the Kenai Peninsula and in 1990 we started raising Elk as a game livestock. We own 57 head of elk at this time and are increasing our numbers to 200. I have been involved in all aspects of agriculture in Alaska serving on associations, boards, and various government appointments. My farming operation is prosperous and will withstand any scrutiny.

I am on the managing Board of Directors for the North American Elk Breeders Association, a national livestock association representing 700 elk ranchers raising over 20,000 head of elk. As a director I am actively involved in the development, as well as the controversy surrounding game farming. I am aware of established and pending legislation in all states. We respond to those that challenge game farming with scientific, economic, and ethical data to support our industry. I have testified before the USDA, National Research Council, and US Animal Health Association to secure the game industries legitimate role in agriculture. I have participated in the World Deer Congress in New Zealand where over 23 nations gathered together to formulate a sound, worldwide game industry policy.

I appreciate the opportunity to provide honest and informative facts related to the game farm industry in Alaska.

Sincerely,

Bill D. Ward

ALASKA FARMERS & STOCKGROWERS ASSOCIATION, Inc.
"THE ALASKA FARM BUREAU"
Game Farming Subcommittee
P.O. Box 290
Soldotna, Ak. 99669
262-5135 FAX 262-7278

GAME FARMING FACT SHEET

FACT - Game farming is an agricultural business conducted by persons who privately own game animal species for the purpose of raising and breeding these animals as domestic livestock for commercial purposes.

FACT - Game farming is endorsed by the Agricultural Task Force and Governor Walter Hickel as a viable economic enterprise for Alaska.

FACT - The "Governor's Task Force On Regulatory Reform" recommends that the administrative authority for elk and game farming be placed in the DNR, Division of Agriculture.

FACT - Existing game farm operations in Alaska are successful, prosperous, and contributing to the economy of Alaska.

FACT - Game farming is a viable and successful national and international industry.

FACT - Game farm products are value added with higher profitability than conventional red meat livestock. Production costs in Alaska for game farm animals are lower than other red meat livestock animals.

FACT - The DNR, Division of Agriculture and the DEC, State Veterinarian have adopted a serious pro-active attitude to game farming with existing and draft regulations in place to manage the industry while protecting the health & welfare of all animals.

FACT - There has never been a documented case in the U.S. of the livestock disease Tuberculosis being transmitted from a private game farm to free ranging wildlife. An infection in wildlife that was contracted from cattle herds in the U.S. did not sustain itself once the source of infection was removed.

FACT - Game farm owners are the ones who are most interested in maintaining the health and confinement of farmed animals. With the high investment in game animals, game farms cannot afford disease or loss of animals through escapement.

FACT - Game farm operations are compatible to the environment and are widely accepted by local communities in Alaska.

FACT - Game farm legislation will not cost the State of Alaska money. Regulatory power and staff administration is already in place in the Division of Agriculture and State Veterinarian with no budget increases required. Game farming provides a significant contribution to the economy of Alaska.

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"THE ALASKA FARM BUREAU"
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262-5135 FAX 262-7278

GAME FARMING FACT SHEET - SUPPORTING INFORMATION

FACT - Game farming is an agricultural business conducted by persons who privately own game species for the purpose of raising and breeding these animals as domestic livestock for commercial purposes.

Game farmed animals by common, academic, and legal definitions are domestic agriculture livestock that should be administered by the DNR, Division of Agriculture under Statute, AS 03.

Domestication and domesticated have several definitions:

"A population that is adapted to life in intimate association with and to the advantage of humans, and whose entire life cycle is carried out under human management." (Annon: Criteria and requirements for sustainable use of wild species. International Union for the Conservation of Nature (IUCN) - The World Conservation Policy. July 1992)

"a species is domestic if both reproduction and the habitat critical for reproduction are under human management. It is therefore semi-wild or semi-domesticated, if only one of these elements is met and wild if neither is met." (Prescott-Allen, C. and Prescott-Allen, R. 1986 The First Resource: Wild Species in the North American Economy. Yale University Press. New Haven)

"domestic animals are husbanded rather than hunted, produced rather than procured." (Hudson, R.J. 1989. History and technology of game production systems. In Wildlife Production Systems, R.J. Hudson, K.R. Drew, and L.M. Baskin (eds). Cambridge Univ Press. 11-27)

FACT - Game farming is endorsed by the Agriculture Task Force and Governor Walter Hickel as a viable economic enterprise for Alaska.

The recommendations of the Agriculture Task Force were endorsed by Governor Hickel in July 1992. Among the recommendations include:

"2. Support unrestricted domestic breeding and raising of all animals, including game species." (Future of Agriculture Task Force, Final Report. July, 1992)

FACT - The "Governor's Task Force on Regulatory Reform" recommends that the administrative authority for elk and game farming be placed in the DNR, Division of Agriculture.

Specific recommendations published by the task force include:

"SI 2 Red meat should be within ADNR's Division of Agriculture, not ADEC and AF&G AS 03.05.030 and 03.05.040; potentially AS 16.05.331"

"An administrative review should take place, on the issue of placement of Elk Farming. The Task Force recommends placement in the Division of Agriculture."

"GP 11 Each business or enterprise type should fall under a primary agency, division, or department."

"For example, the division of Agriculture would serve as the primary agency for farmers, who would deal with just a single agency for regulatory, permitting, and reporting purposes on all agricultural matters. On matters non-agricultural, the farmer would still be dealing with the appropriate division or department. (Final Report of the Governor's Task Force on Regulatory Reform, March 19, 1993)

FACT - Existing game farm operations in Alaska are successful, prosperous, and contributing to the economy of Alaska.

Reindeer, Bison, Musk-ox, and Elk are the authorized game farm species in Alaska.

The free ranging reindeer herding operations in Western Alaska have been regularly operating at a profit. Meat, antler, and breeding stock sales have contributed to the economy of native Alaskans.

Reindeer farming operations in the Matanuska Valley and the Kenai Peninsula are profitable by relying on meat, antler, and tourist opportunities.

Bison farms in Delta, Fairbanks, Kenai Peninsula, and Kodiak Island are established and provide profitable returns to the owners.

The Musk-ox Farm in the Matanuska Valley is providing a reliable return with Quviut wool supplied to native weavers and income from tourist visitors.

An elk farm on the Kenai Peninsula is expanding and profitable with live animal sales, antler production, and meat production.

FACT - Game farming is a viable and successful national and international industry.

Game animals have been in domestic ownership in the United States since early man. Currently there are approximately 700 elk farms with 18,000 animals in the U.S. and numbers are expanding. Deer farmers with about 30,000 animals are supplying venison to domestic markets with imports being necessary to fulfill demand. (Assessment of Risk Factors for *Mycobacterium bovis* in the United States, USDA:APHIS:VS, November 1992) The health awareness of consumers combined with the low fat nature of game meats equates to a strong demand for game meats. Throughout the world, game farm production is embraced as a legitimate and profitable multi-billion dollar industry. The recent World Deer Congress in New Zealand brought together 600+ participants from over 23 nations to provide for the advancement of the expanding game farm industry. In the lower 48, legislation is being implemented in most states to provide for positive administration by the Departments of Agriculture to accommodate this rapidly expanding and profitable addition to agriculture.

FACT - Game farm products are value added with higher profitability than conventional red meat livestock. Production costs in Alaska for game farm animals are lower than other red meat livestock animals.

The world wholesale price for game meats are at least double that of beef with a steady demand. Specialty marketing increases prices even higher. Velvet antler production for oriental medicine is based on long standing historical tradition assuring a steady demand for antler products. By-product demand for hides, organs, and carving material is strong with high prices.

Production costs are low. Free ranging reindeer herds have low input costs. Once the infrastructure is in place, the cost to raise game animals is lower than for other domestic livestock. Game animals require minimal care and are efficient utilizer of natural forage. They are efficient converters of feed to energy and typically require less feed to produce a pound of gain than other animals. With normal husbandry practices, game animals are healthier and require less labor to manage.

FACT - The DNR, Division of Agriculture and the DEC, State Veterinarian have adopted a serious pro-active attitude to game farming with existing and draft regulations in place to manage the industry while protecting the health and welfare of all animals.

The Division of Agriculture has existing statute authority to provide for the fencing regulations, ownership identification by

branding and tagging, management assistance, and other needed regulations. Currently the Division of Agriculture is drafting expanded regulations to provide for the effective administration of game farming.

The DEC, State Veterinarian has full regulatory authority to protect the health and welfare of all livestock in Alaska. Accurate disease testing procedures are available to document the healthy nature of animals within the state as well as all imported animals. The isolated nature of Alaska gives the State Veterinarian a unique opportunity to screen any animal entering the state and an ability to prevent infected animals from entering Alaska. Because of our arctic environment, there are few livestock diseases that can survive in the state. For the few diseases that can survive, there are accurate testing procedures available to detect disease and regulations to prevent an infection.

The DEC, State Veterinarian is concerned about the possible risk to domestic livestock for parasites and disease caused by the relocation of wildlife around the state by ADF&G. Since some diseases and parasites are endemic in wildlife, such as *brucellosis* in Caribou, Dr. Gore believes that testing of wildlife should be required before any movement occurs. (John Cramer-Div. of Ag. Director & Bert Gore, DVM-State Veterinarian, personal interview, March 1993.)

The UAF, Reindeer Research program has maintained an ongoing health program in free-ranging privately owned reindeer to vaccinate against *brucellosis* and provide treatment to control warbles and nasal bots. This further documents the pro-active attitude by agriculture to protect the health and welfare of all animals. (Lyle Renecker, Asst. Professor, UAF Reindeer Research Program, personal interview, March 1993.)

FACT - There has never been a documented case in the U.S. of the livestock disease Tuberculosis being transmitted from a private game farm to free ranging wildlife. An infection in wildlife that was contracted from cattle herds in the U.S. did not sustain itself once the source of infection was removed.

"No case of transmission (M. Bovis, Tb) between captive wildlife and free ranging wildlife has been documented." (Assessment of Risk Factors for *Mycobacterium bovis* in the United States, USDA:APHIS:VS, November 1992)

Allegations game farmed livestock will infect free ranging wildlife with diseases such as Tb, *brucellosis*, etc., simply are not true. In the United States there are two reported cases of Tb in free ranging wild deer in this century - 90 years -, both were in white-tailed deer in New York, one in 1934 the other in 1961, and both were associated with Tb infected dairy herds. *"There has been no documented instance where M. bovis (Tb) was maintained in a wild population of Cervidae once the source of the infection in either cattle or free-ranging bison was eliminated."* (Ibid.)

FACT - Game farm owners are the ones most interested in maintaining the health and confinement of farmed animals. With the high investment in game animals, game farms cannot afford disease or loss of animals through escapement.

Game farming like any other business venture requires a high capital investment in land, improvements, and livestock. It is possible to have over a million dollars invested in a game farm business. The livestock are the production base that provides the return on investment. To be productive with an economic value the animals must be kept under positive control and remain healthy throughout their productive life. It is absurd to think that the game farm owners will do anything less than provide for a maximum effort to retain these provisions. The regulation fencing on a game farm not only provides confinement fencing for the livestock but provides the owner with the security of excluding other livestock or wildlife that may be diseased.

FACT - Game farm operations are compatible to the environment and are widely accepted by local communities in Alaska.

A game farm management plan provides for the health and welfare of the livestock. In addition the land base resource must be managed to provide for continued well balanced production every year. Game farmed animals, while gregarious, do not thrive under heavy population densities so lower stocking rates are needed to maintain the health of the animals. Game animals do not impact the pastures or watering sources like other domestic animals. Effective rotation of livestock provides for well developed pasture ranges and game animals do not languish around water sources. The feeding habits and hooved nature of game animals permit grazing without impact to riparian zones. Fenced game farms provide natural habitat for waterfowl habitat as well. Typically migrating waterfowl seek out the protection of fenced areas which exclude predators and offer security to raise their young.

Game farming is accepted as a "natural" livestock business for Alaska. The general public may question the viability of some agriculture ventures in Alaska but they readily recognize the appropriate nature of raising hardy northern adapted animals in our climate. The general public is naturally curious about game farms and the animals. Once they recognize that the animals are raised in a healthy environment, they gain substantial pleasure in viewing these magnificent animals in farmed situations. There has been no negative public response to game farming in Alaska. Local boroughs recognize and endorse the potential of game farming as a legitimate business venture.

"It appears that the additional 80 acres of state land, together with the KPB tract, will enhance Mr. Ward's proven success with elk

and cattle ranching. In our opinion, both tracts are not suitable for other types of development. Utilization of these public lands for a viable agricultural project is viewed as stimulus to the local economy, therefore, in the public interest." (Richard Troeger, planning director. Kenai Peninsula Borough, Dec. 14, 1992)

FACT - Game farm legislation will not cost the State of Alaska money. Regulatory power and staff administration is already in place in the Division of Agriculture and State Veterinarian with no budget increases required. Game farm products provide a significant contribution to the economy of Alaska.

The Div. of Ag. and State Vet already have the regulatory structure in place to administrate game farming as it is just an extension of existing livestock farming. The Director of the Division of Agriculture, John Cramer, and the State Veterinarian, Dr. Bert Gore DVM, have both indicated that they can administrate the industry with existing resources. (John Cramer & Bert Gore, personal interview, March 1993.)

As mentioned in other FACT statements, game farm product sales will contribute and enhance the economy of Alaska. A strengthening of local economies is provided with game farm agriculture. Local employment is provided on the farms, support businesses such as veterinarians, equipment dealers, feed suppliers, and many others whose support is needed to provide for the operation of the business. Meat products are provided to in-state consumers and a stable supply of a preferred diet is available to native communities. Antler products are exported out of Alaska contributing to the United States's balance of trade.

FOR ADDITIONAL INFORMATION, CONTACT:

Bill Ward - Chairman
Game Farm Subcommittee
P.O. Box 290
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UNIVERSITY OF ALASKA FAIRBANKS

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May 4, 1992.

The Honorable Cliff Davidson
The State Senate
Room 108
State Capitol
Juneau, AK99801-1182

Dear Senator Davidson:

This communiqué is in response to House Bill No. 478 would like to state my personal views and experience as a wildlife biologist on the issue of game farming. First, commercial production of wild ungulates or game farming offers a way for conventional agriculture to diversify. This diversification is not only beneficial for the agriculture industry which would allow Alaskan producers to place "their peas in more than one pod" but it adds a missing dimension to wildlife management. Wildlife managers often forget that if we are concerned about wildlife management and production of these ungulate species then to meet the needs of today we must diversify wildlife management. Wildlife management is diversified through protected, integrated, and productive management systems. Protected systems involve Parks, however, the land base is limited in size. Integrated or compromise management systems is practiced by most agencies where there is an attempt to balance the needs of other resources with wild ungulates. The missing dimension in most systems is productive management which includes game farming, ranching, and herding. In Alaska, the productive strategies of concern are farming and herding. In the specific case of farming, permissible species can be raised on private land bases and help add this missing dimension of management to our State Goals.

It should be remembered and acknowledged that game farming will not detract from the value of wildlife. But, there will be an additional importance. In Canada, there was a study which investigated the value of wildlife to citizens. They found that while a large portion of the public obtained some value from wildlife there was another group that received no benefit and wildlife was of no importance. This addresses the issue that society is changing and has changed from years past. The issues of concern in past are not resolved by methods which are no longer applicable for today's problems. However, if the large percentage of the public that extract no value from wildlife can obtain some value then we have accomplished an important goal. There is many people in this state and outside that DO NOT HUNT and do not wish to hunt. For these persons and those that extract no value from wildlife, a taste of meat and it's association with a species could prove a benefit. If these people taste the meat and desire more they may recognize its importance and therefore more support for production. What people view as "Wild Life" will not be detracted by game farms. It has been shown in Canada that people enjoy seeing game farmed ungulates but still seeing them in the wild. It is two settings that offer two rewards but both are complementary. For many people, they would never have the opportunity for viewing if not for the game farms. But overall, we address the needs and problems of today and develop diversified wildlife management with the inclusion of productive management systems.

Disease and parasites in game farmed species has been expressed as a major concern and a threat to wildlife. However, the potential threat should be no greater than for other conventional livestock. In addition, animals entering the state will be monitored and scrutinized by the State Veterinarian. It is known that animals permissible for game farming have few unique diseases or parasites and have generally been considered to have

GAME FARMING OPINION: DR. L. RENECKER
UAF DIV. OF PLANT & ANIMAL SCIENCE
SCHOOL OF AG. & LAND RESOURCES MGMT.

fewer disease/parasite problems than livestock. Because game farmed ungulates represent an economic commodity it is in their best interest to maintain healthy animals that are free of disease and treated for parasites regularly. A greater threat to the game farmer is potentially untreated wild species coming in contact with the ungulates maintained on the commercial game farm. There has been several memos that have been circulated to Legislators that refer to disease and testing and have originated from ADF&G. These memos have not presented all facts about disease testing, disease status, and the disease research conducted by the Reindeer Research Program at UAF in the proper context. In fact, some of the data and facts collected for these memos (apparently from sources other than myself who are not associated with the University) are incorrect. These issues and the overall concept of game farming will be outlined in a separate brief to Mr. Carl Rosler and a copy will be forwarded to your attention. I strongly urge you to carefully weigh the correct facts. However, in summary, brucellosis is being monitored and controlled in reindeer in Alaska. Tuberculosis is being tested for on imports - the problem is not one of a better test needs to be found but rather one for governments to adopt better techniques which are available. If you require further information please contact me.

Sincerely,



Lyle A. Renecker
Assistant Professor
Reindeer Research Program
Tele: 907-474-7166

474-7166

BRIEF ON GAME PRODUCTION

by

Lyle A. Renecker

Assistant Professor, Agriculture and Forestry Experiment Station,
University of Alaska Fairbanks

Game production is not exactly new to man. Man has been associated with the use of native wild herbivores in North America since Paleolithic times more than 10,000 years ago. Deer farming has been practiced by the Chinese people for more than 2,000 years. Also, reindeer herding has been present in the cultures of northern Europe and Asia for over 2,000 years. The Romans enclosed deer in parks for both pleasure and profit as was stated by Columella in accounts of ancient times that "wild creatures such as red, roe, and fallow deer... sometimes serve to enhance the splendor and the pleasure of their owners, and sometimes bring profit and revenue". He also makes note of deer being in enclosures and given supplemental feed in order that "...when the custom of giving feasts called for game, it might be produced as it were out of store". This is not that different from what we perceive as game farming today.

Agriculture today must diversify in order to realistically anticipate survival. One of the options which has been pursued around the world is game farming. The form and rules vary in accordance with the political jurisdiction, however, the concept is not new. For a complete world wide perspective, see Renecker and Hudson (*Wildlife Production: Conservation and Sustainable Development*; 1991).

Management Systems

In order to develop and diversify wildlife management strategies, a blend of protective (parks), multiple-use (integrated), and productive strategies should be employed. Protective measures represent parks and wildlife preserves but these areas are small and usually are separated by political boundaries. Multiple-use or sometimes referred to as integrated or compromise systems attempt to satisfy the conflicting demands of several users. Land uses are integrated in this type of management system typical of government jurisdictions in order to maximize benefits, however, there are always trade-offs. Finally, the missing link in complete diversification of wildlife management is productive systems. Here a single resource is managed

intensively for peak performance. Game ranching/farming is one way to provide this missing dimension. Today, present concepts relate to control on removal rates of wildlife and guarantee a supply of wild stock for sport hunting. However, this does not resolve the management issue on privately-owned land where importance is an issue of value.

Demands for Precise Definition

One of the most important considerations in the development of a commercial game production industry is the proper definition of the business at hand. Terms can confuse and suggest different conceptual ideas to various sectors of the public. Therefore it is important that definitions be concise and consistent with biological and agricultural terminology. Specifically, I refer to the confusion that can revolve around the use of either game cropping, herding, ranching, or farming. These are clearly defined by Renecker (*Agroborealis* 23: 20-24; 1990).

Positives Realized

Growth & Demand - In recent years, conventional agricultural has been subjected to continual pressure of diversification. The farming business continent wide has been plagued with family farm foreclosures as a result of low commodity prices and political subsidy wars. Commercial game production offers a lean, healthy meat product that is in public demand. In return, this health conscious society is willing to pay sound returns for a quality, consistent product. Over the last 5 years, there has been a consistent increase in the trade of farm-raised venison. For example, from 1986 to 1991, New Zealand has increased its export sales of venison from about 1,300 metric tonnes to 3,000. The increase has come with concomitant demand for standards of quality and supply. In 1991, the USA alone bought New Zealand farm-raised venison valued at over \$ 1 million which has doubled from the mid 1980's. Clearly, the market will bear a considerable increase in supply, however, growth must occur in the industry worldwide to meet this demand for a quality product. Quality Alaska reindeer, wapiti, or bison are possible candidates for sale in this marketplace.

Culturally-consistent - An additional benefit is the culturally-consistent livelihood it provides for our Native people. Whether, the production strategy is farming or herding, commercial game production can provide employment and financial opportunities and yet attempt to remain in balance with traditional cultures.

Health - Disease regulation and control has been a concern of both opponents and proponents of this new industry. For example, there has been continuous blame placed on the game industry for the outbreak of the tuberculosis situation in Canada and the lower 48 states of the USA. However, is this a realistic evaluation or, in fact, was it the game production industry that has raised important questions that relate to the testing of even domestic ruminants. Precisely, the tuberculosis situation resulted from a breakdown in the screening process - the tests were not accurate enough. This does not open an immediate arena for emotional and erratic decisions but rather the situation must be resolved to allow business to be conducted as usual. Remember, this means the industry will have clean, healthy animals because they can be tested or vaccinated - and the system works. These newly developed techniques can then be applied by biologists to wild populations of ungulates.

Game animals have few unique diseases and are generally are considered to have fewer parasite/disease problems than livestock. Once intensive practices are employed on the range or farm, animals can be managed through normal health program procedures.

Fences and Handling - Fences and handling are incredibly important. As with other animals, facility designs must be utilized that minimize stress and take advantage of the animal's natural behavior to the manager's advantage. Game farm producers have rapidly learned these behavioral principles and adapted methods that facilitate management. For example, any wild or even an animal habituated to the presence of humans will rarely move down a straight alley that ends in a right angle corner or a dark shadow that streams across the end of the passage. It could be referred to as natural instinct or perhaps common sense. However, place a slight bend or curve in the alley and the animal can see there is a possible exit and a place to hide and feel secure from the herder who approaches from the rear. The animal moves around the corner into the security of a holding pen and the gate is closed before realizing that it is captured .

Fence materials (hi-tensile netting) have been developed and marketed specifically designed for game farms. Various combinations can be used to meet both practical and legal concerns for the perimeter and management needs of the internal paddocks. There is also wire netting that is designed with smaller openings at the bottom that increase in opening size towards the top. This keeps dogs and coyotes outside and prevents small calves from escaping.

Development Plan - Since facilities are essential it is important that the farm layout and design for the initial construction and future developments are thoroughly considered. A

development plan has helped many game farmers and herders plan their needs for infrastructure and capital many years in advance.

Economics and Markets - The initial investment for physical structures (eg. fences, handling facilities, etc.) is higher than for livestock production. However, barns and calving sheds are not required as they are with cattle. Markets for farmed and herded game animals exist and appear to have the potential to expand in the future. In Alaska, reindeer, wapiti, and bison are potentially three possible source of lean and well-flavored meat which is in consumer demand. Velvet antler is another commodity produced by both wapiti and reindeer that is utilized in Asian pharmaceuticals and traditional tonics. Other markets, such as for breeding stock, viewing, etc., can also be explored and researched.

Poaching - It has been suggested that poaching will increase with the expansion of the legal market for game meat. This will be improbable because of consumer desires for a consistent, high quality product. It implies government inspection and ante and post mortem inspection. In order to obtain the government stamp, the meat must be handled under rigorous standards which will be one of the producer's platforms for marketing a quality specialty-item.

It is obvious that there is potential in this new industry - situations and developments both around the world and here in Alaska have shown this. The industry will require research as it integrates and grows in size. An important issue is the continuous interaction, understanding, and compromises of all persons involved in order to ensure logical business development.

ADMINISTRATION POSITION ON GAME FARMING SUMMARY

- The administration supports responsible game farming in Alaska. Game farming is in its infancy but has potential to grow into a viable, sustainable industry.
- For growth to occur, the industry requires consistent state policies, stability in state laws and fair and effective regulations.
- The Departments of Environmental Conservation, Fish and Game and Natural Resources have developed a joint position paper that will lead to statutes, regulations and policies that provide opportunities for the game farm industry to expand while protecting the domestic livestock industry and wildlife resources from undue risk.
- Key points in the administration position are:
 1. Initially limit game farming to four species (reindeer, bison, elk and muskoxen).
 2. Provide a regulatory mechanism to expand the list of species that may be farmed.
 3. Prohibit farming of exotic species to protect native species.
 4. Farming of caribou cannot occur until the federal reindeer act of 1937 is amended. That federal law limits ownership of reindeer in Alaska to Natives and defines captive caribou as reindeer.
 5. Farming of moose is not recommended as a commercial enterprise. It has not been shown to be economically feasible. Biological attributes of moose make them unsuitable for commercial game farming.
 6. The Department of Natural Resources will have the responsibility and authority to regulate most aspects of game farming. Department of Environmental Conservation will have authority for animal health regulations. Fish and Game will have authority over surplus game animals for game farming and joint responsibility with DNR for adding species to the list of game farmed animals.
- We have drafted proposed legislation based upon House CS for CS SB No. 46 that incorporates these key points.
- The administration believes this proposed legislation will lead to a strong game farming industry in Alaska while protecting our valuable wildlife resources.



CENTRAL COUNCIL
 Tlingit and Haida Indian Tribes of Alaska
 ANDREW P. HOPE BUILDING
 320 West Willoughby Avenue - Suite 300
 Juneau, Alaska 99801-9983

Fifty-Eighth Annual General Assembly
CENTRAL COUNCIL OF TLINGIT AND HAIDA INDIAN TRIBES OF ALASKA
 April 15-17, 1993
 Sitka, Alaska

SB46

RESOLUTION 93-42
TITLE: GAME FARMING RESOLUTION

Submitted By: Hoonah T&H Community Council

WHEREAS, this bill would introduce wild big game animals to be sold as meat, causing poaching of wild big game animals to be sold as commercial and Federally inspected food; and

WHEREAS, Alaska has sustained moose, deer, bison and other big game animals without outside help; and

WHEREAS, the State of Alaska needs it's financial funds to ensure that it's citizens receive a proper education, to increase their standard of living; and

WHEREAS, big game animals such as moose knows no boundaries; and

WHEREAS, the Alaska State Legislature will use Alaska laws to further their own big game management plans while Alaska has a Board of Fish and Game with rules and regulations, biologists and the knowledge to let Alaska be Alaska and wild Big Game animals be free; and

WHEREAS, Alaska does not have a need for wild big game animals to be farmed, butchered, sold; and

WHEREAS, this bill is not specific enough because it mixes wild big game and domestic farm animals and in general does not have an impact statement, on where the farms will be nor does it say what will happen to the people who live around these farms.

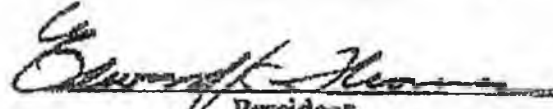
NOW THEREFORE, BE IT RESOLVED by the General Assembly of the Central Council of Tlingit and Haida Indian Tribes of Alaska in session this date, that Senate Bill #46 does not pass the Alaska Lawmakers and become law; and

BE IT FURTHER RESOLVED that the lawmakers recognize the Alaska Board of Fish and Game's authority to manage big game animals, and to recognize subsistence rights of rural Alaskans by not allowing wild big game meat to be sold, and by not having big game ranches force rural people away from places that they have lived in for years, and by using these State funds for the Education of rural Alaska residents; and

BE IT FURTHER RESOLVED that this resolution be directed to the Alaska State Senate and to the House Representatives, to the Governor of Alaska, and to Tlingit and Haida Central Council.

ADOPTED this ___th day of April 1993, by the fifty-eighth General Assembly of the Central Council of Tlingit and Haida Indian Tribes of Alaska, in regular session at Sitka, Alaska.

CERTIFY


President

ATTEST

Tribal Secretary

Soviet farmers learning to harness power of the moose

Not only do hunters kill far more moose in Russia each year than in Alaska, the Soviets have pioneered moose husbandry for meat and milk production as well as for riding and farm work.

Three experimental moose farms exist in the Soviet Union, according to H. R. Timmerman, one of Ontario's top moose biologists. Timmerman attended the third International Moose Symposium held in Syktyvkar, U.S.S.R., during the summer of 1990.

Timmerman, in an article published in the May edition of *Angler & Hunter* magazine, said he visited the oldest such farm, established in 1949 by K. P. Knorre near Yaska. During the past 40 years this farm has raised and domesticated 450 moose, some of which represent the sixth generation of original stock.

Operation of the moose farms, as Timmerman describes it, is similar to dairy and beef production with domestic cattle, but with some notable differences.

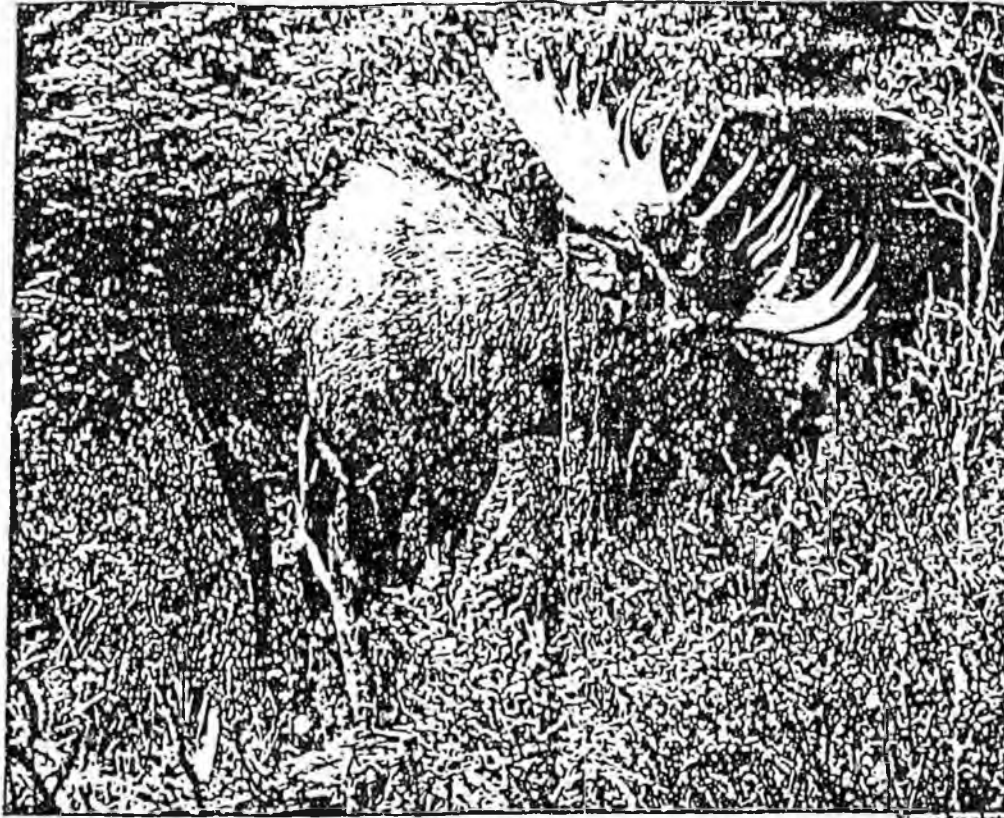
The Russians have found that the key to domestication of moose requires that each newborn calf imprint to a human milkmaid four to five hours after birth.

Consequently, as moose cows approach the time to give birth, they are taken to an enclosure and attended by milkmaids until birth occurs, usually from early May through mid-June each year.

After its first suckling, each calf is removed from the cow and fed from a bottle by the same milkmaid up to five times a day. Each cow is milked by hand at the birth site. They quickly substitute their milkmaids for their offspring and are released from the enclosures to the surrounding forest, but return twice a day for milking at 6 a.m. and 6 p.m.

That should sound familiar to anyone who has ever been associated with a dairy farm. And incidentally, I'm not being chauvinistic in saying that the moose cows and calves are taken care of by milkmaids. I assume men could handle those chores as well as women, but Timmerman doesn't indicate that he saw any men involved in that phase of the operation, and his pictures with the article show women doing the milking and handling of the calves.

As they grow older, the calves are fed milk substitutes or diluted sheep milk, taught to drink from a pail and are weaned by mid-September. About 95 percent survive to six months of age, when they are usually moved to an active logging area so they can feed on remaining tree tops and limbs.



Soviet farmers are perfecting methods to milk moose. They also raise the ungulate for food.

Moose cows are bred for milk production by selecting the best individuals, Timmerman says. Those who give the most milk generally give birth to calves that also have high milk yields. A moose cow produces about a gallon of milk a day, but this can be increased by more frequent milkings.

Eventually, I suppose by selective breeding, you could have some Jersey- and Holstein-type moose and even some Hereford and Black Angus types for meat.

Moose milk is richer than domestic cow's milk, containing up to 11 percent fat, 9 percent protein and a host of vitamins and micro-elements. Timmerman says the milk has been touted as having unique medical properties, particularly for the treatment of stomach ulcers and radian lesions. However, this hasn't yet been scientifically proven.

The moose milking must not be an economically

viable operation. In fact, it appears the farms are more on the line of a socialist experiment, and Timmerman speculates they may soon disappear.

At present, all the milk produced at the farm Timmerman visited is fed back to calves. This is partially due to the lack of facilities to sterilize, store and distribute it, he says.

Bull calves and cows that don't produce much milk, as well as calves, are butchered for meat, which is two to five times cheaper than cattle, he says. This would seem to indicate that raising moose for meat could possibly be an economically rewarding enterprise.

The bull calves, like beef cattle, are castrated. Timmerman says they are quiet and calm and retain their excellent meat qualities even to old age.

In the past, some castrated bulls were trained to



Anchorage Times
July 18, 1991

Ed Cooper

OUTDOORS
COLUMNIST

carry humans on saddles, cargo or haul sleighs in winter. Training the moose, however, was a labor-intensive process. Men were involved here, and apparently a bit of wild east rodeo was part of the exercise.

The training also tended to cause the animals to lose their fear of man or dogs, making them vulnerable to poachers and predators.

Yes, poachers are a significant factor in annual moose harvests in the Soviet Union, as they are in Alaska and other parts of the world.

Alaska's game regulations, incidentally, do not allow private ownership of moose, as they do buffalo and musk ox. Bills have been introduced in the legislature to allow moose ranching, but none have passed.

Officials in the Soviet Union estimate about 1 million moose roam the wilds in eight of its 15 federated republics, with the highest densities in the Baltic republics, the western and northern regions of the Russian Federated Republic, including the Komi A.S.S.R., and northern areas of Byelorussia and portions of the Ukraine.

In 1988, some 70,000 moose were reportedly taken by 20,000 to 30,000 hunters, a major percentage of whom are professionals. That compares with less than 10,000 moose taken by hunters in Alaska during the same year.

Now Russia is opening up its hunting, not only for moose, but also for bear, wolves and other species, to hunters from other parts of the world. They are likely to provide formidable competition to Alaska's guides and outfitters starting as early as next year.

Incidentally, Alaska isn't the only place in the world where officials worry about wild moose roaming streets, highways and railroad tracks. Timmerman said that up to 70 moose are captured in and around Moscow each year.

They just take them out to the moose farms. But then, I suppose to a moose, that could be the equivalent of being banished to Siberia.

photo →

Dr Hyle Renecker →
Head of REINDEER DEPT.
@ U of A in Fels.
Has had about 8
yrs experience with
Domestic Moose in
Canada

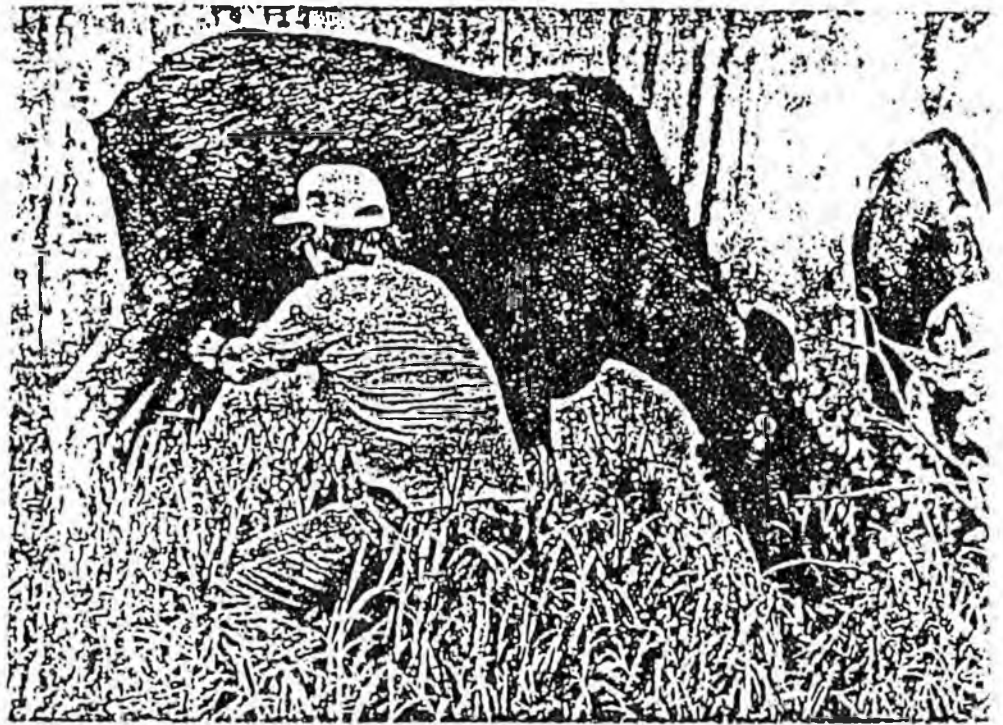


Fig. 2. Milking an untethered moose cow at the Ministik Wildlife Research Area.

titic appears to lag behind metabolic demands and losses of over 1 kg/day have been observed in penned adults. Voluntary intake and weight gain are highest during late spring and early summer. However, high ambient temperatures during July and August result in static or declining body weight as a consequence of reduced feeding activity to minimize heat stress. During the rut, bulls reduce feed intake and can lose over 1.3 kg/day. Subsequent to the breeding season, intake and weight of bulls increase until late November–December in preparation for winter.

Moose breed successfully under intensive husbandry but fecundity may be lower than in wild populations. The birth peak is generally broader than in the wild and birth weights are high ($\bar{x} \pm S.D.$;

16.6 ± 0.5 kg, $n=2$). However, dystocia and late conception may be associated with heavy winter feeding (Renecker 1987).

Calves are easily obtained from the wild and adapt well to a range of systems of hand-rearing. Occasionally problems are encountered at weaning. Growth rates are in the order of 0.69 kg/day for bottle-fed calves (Welch pers. comm.) and 0.7 kg/day for weaned animals at 6 months of age.

Russian workers have pioneered studies on the dairy potential of hand-reared moose (Knorre 1961). We have milked untethered moose which were either standing or lying (Fig. 2). The milk is more concentrated than domestic cow's milk with higher fat, protein and total

Lawmakers high on moose bill

By KATE RIPLEY
Staff Writer

JUNEAU—Last December, Doug and Opal Welton packed their three children into an old bus, drove 750 miles in the dead of winter and camped on a Juneau beach in the freezing rain.

They moved from their Chatanika home to the capital city for several months of down-home lobbying on behalf of would-be moose farmers everywhere.

The Weltons are not in the moose farming business, but would like to be. The problem is state law says they can't.

The couple have worked for several years to get the law changed so that people would be allowed to corral, raise and slaughter moose, as well as sell the meat commercially.

In addition to providing steady meat and milk for their family, a moose farm also would be a great money-making tourist attraction, the Weltons said.

"This means everything to us, because it will provide the lifestyle we came to Alaska to live," Doug Welton said.

The couple found a home to rent in Juneau. Doug has a handyman business and Opal substitute teaches. They plan to stay as long as it takes to ensure the moose bill, which has been introduced several other times, becomes law.

Observers say the mood is in the Weltons' favor.

The bill already sailed through the Senate with futile protest from the Democratic minority. It is now before the House Resources Committee, where it died last year under its former chairman, Rep. Cliff Davidson, D-Kodiak and a strong opponent of the bill.

This year the key committee is chaired by Rep. Bill Williams, D-Saxman. Williams is one of a handful of Democrats who crossed party lines to join the House Republican majority. Republicans generally support moose farming for its economic development benefits.

Williams himself is still non-committal about the bill.

"I'm going to wait until we get through this hearing. We're going to listen to the people, that's for sure," Williams said.

Veteran lawmaker Sen. Jay Kerttula, D-Palmer, said moose farming could be a \$100 million industry, but that more stringent controls on the business are necessary.

"I'm not against moose ranching. I'm just against the moose farming that they're talking about here," Kerttula said.

Sen. Georgianna Lincoln, D-Rampart, voted against the bill this year, though she has supported similar measures in the past.

This bill was different, Lincoln said, because of its emphasis on commercial meat sales.

"I just felt that that opened up a huge window for poaching, because how do you determine which is farmed moose and which is poached moose?" said Lincoln, who figures the House will approve the measure.

The rest of the Fairbanks delegation in the Senate is solidly behind the bill, sponsored by Mike Miller, R-North Pole.

Miller predicted the vote in the House will be close, but that it would pass if it makes it to the floor.

Rep. Davidson hopes it doesn't. "I'm not going to vote for it, but it's hard to say," said Davidson, who Welton nearly came to blows with last year in the Capitol.

Rep. Bill Hudson, R-Juneau, agreed the bill probably will pass, since this Legislature is more sympathetic to so-called "red meat bills" than those in the past.

"There may be some limitations placed on it before it actually passes out," Hudson said.

Rep. Irene Nicholia, D-Tanana and an opponent of the measure, also agreed chances of getting the measure through the house are fairly good. "More crazy things have happened in this House so far this year," she said.

House Majority Leader Gail Phillips, R-Homer, offered no early predictions, but said the idea of moose farming has merit.

"I think if we receive the assur-

ances that biologically it would work, maybe it's worth a try," Phillips said.

House Minority Leader Fran Ulmer, D-Juneau, said she has little sympathy for the proposal. "I wouldn't think I would describe it as one of the most important things that has to happen this year."

Of the Interior's House members, only Rep. Gene Therriault, R-North Pole, and Joe Sitton, D-Fairbanks, have voiced support for the bill. Rep. Al Vezey, R-North Pole, said he supports the concept of moose farming, but hasn't read through the bill yet.

The rest of the Interior delegation in the House is undecided.

A looming question over the whole affair is whether Gov. Walter J. Hickel will sign the bill into law, assuming it gets to his desk.

His Department of Fish and Game doesn't like it, but the departments of Environmental Conservation, Commerce and Natural Resources all have given it an OK.

In an interview last week, the governor said he has some concerns about the bill and questioned its reliance on "surplus" moose for seed stock.

Both proponents and opponents of the bill acknowledge that the word "surplus" needs definition.

Fish and Game officials say "surplus animals do not exist." Nick Colombo, a Delta Junction farmer who backs moose farming, believes surplus animals should be defined as those that are seriously injured, orphaned, or starving.

"They needed to define what a surplus is before they even started with the damn thing," Colombo said. "That's what killed it last year."

Kris Lethin, the governor's legislative liaison, said Tuesday Hickel's concerns mirror those of Fish and Game's.

Lethin would not, however, speculate on whether the governor would veto the measure. Sen. Miller said he doubts the Legislature has the two-thirds vote needed to override a veto.

Moose farming in Alaska: recipe for disaster or economic blessing?

By KELLY BOSTIAN
Staff Writer

Visions of moose farming in Alaska are as wide and varied as the palmated antlers that perch atop the long-legged ungulates.

Supporters say moose farming would offer economic self-reliance, especially in rural areas, to many people. Others say a moose farming bill now in the hands of state legislators is a recipe for disaster.

Senate Bill 48 allows "surplus" moose to be confined and domesticated, and the meat inspected and sold commercially or for personal use. It creates rules similar to those applied to the dairy and beef industries.

Nick Colombo, a Delta Junction farmer who lobbied for a similar bill last year, said the thousands of fallow acres in the Delta Barley Project and other lands between Delta Junction and the Canada border are ideal for moose farming.

"I would just hate to see the state go off on another binge to try and develop another type of agriculture. I don't see any light at the end of the tunnel on this stuff."

—Al Franzmann, a Game Board member from Soldotna and former director of the state's Moose Research Center on the Kenai Peninsula

"Have you ever seen the country between here and the border? There's nothing," he said. "I think there is enough land in this country that they could spare 100,000 acres for raising moose."

Moose farming opponents say such a large operation would set Alaska on the same road as the Lower 48—toward destruction of large predators that would inevitably want to feed on privately-owned moose.

But Colombo said fences designed to keep moose in would like-

wise keep predators out. "They don't know what they're talking about," he said.

The Alaska Board of Game as a whole recently stated its opposition to the bill.

Al Franzmann, a Game Board member from Soldotna and former director of the state's Moose Research Center on the Kenai Peninsula, said moose are expensive to raise and require a large piece of land for range.

"I would just hate to see the state go off on another binge to try and

develop another type of agriculture," he said. "I don't see any light at the end of the tunnel on this stuff."

Supporters of moose farming note that the Swedish government puts vast amounts of meat on the table for its people through its moose management system. But Franzmann said the plan before the Legislature bears little resemblance to Sweden's.

Forests in Sweden are harvested to create browse and bolster moose populations that are harvested by hunters. That's not farming, he noted. "What they have is intensive forest management."

But other state officials are supportive of the moose farming idea.

Raga Elim, Department of Natural Resources special assistant in Juneau, said that agency withholds judgment on the economic viability of moose farming. "Let the market

See MOOSE, Page A-8

MOOSE: Farming idea has critics, backers

Continued from Page A-1

dictate if it is a viable business and if individuals want to pursue it then let them. It's not our position to prejudge the economics of it."

Raga said the department would probably lend financial assistance to moose farmers with the state's Agricultural Revolving Loan Fund.

"We need to look at some of the specifics, but in general we are in favor of the bill," said John Cramer, director of the state Division of Agriculture in Palmer.

The Department of Commerce and Economic Development also supports the idea. The department's position paper states the bill will give greater opportunity to Alaskans to provide for their families. It further states the Division of Tourism is standing by to offer technical assistance to moose farm owners to add a tourism/education component to their operations.

Fish and Game officials say they are "neutral" on the bill, but they don't hold back reasons it shouldn't

pass.

"It's not like we're just naysayers," said Division of Wildlife Conservation Director Dave Kellyhouse of Juneau. "But the biology tells you all along that (moose) are not the animal to hang your hat on for a successful game farm operation."

He added that the department would be more supportive of muskoxen operations. "They are smaller, they're a herd animal and they take less land to raise," he said.

Disease among domesticated moose is a major concern, according to Fish and Game officials. They point to problems that cropped up with elk domestication in Canada and the western United States. Kellyhouse said a tuberculosis outbreak in Alberta among domesticated elk cost \$10 million and several human lives.

State wildlife biologist and disease specialist Randy Zarnke of Fairbanks said potential disease disasters with domesticated moose

are theoretical. "But as you get more and more animals in captivity and bring them into higher densities your theoreticals often become actuals," he said.

Bert Gore, state veterinarian with the Department of Environmental Conservation of Palmer, has little worry of serious disease cropping up in indigenous moose.

"I'm not totally convinced that farming some moose up here creates that great of a health risk," he said. "Normally the ones that are free-ranging pose the greater health risk than the confined ones. The animals that are behind a fence are closely monitored. In the wilderness you don't know what happens, they just die and the wolves eat them."

The time has come for moose farming

By DOUG WELTON

As I go through this life here on planet Earth, amidst all the confusion and grime, I am constantly aware of how unsettled society is—the soaring crime, suicide and destruction.

I get up in the morning and turn on the radio and hear the day's recital of what we are doing to ourselves, and to each other and what our government is doing to all of us. And then I compare the way I live my life, and the way I treat others, and think about what I want to do in this crazy world. And I can only wonder how what I want to do is illegal, while all the grief and greed and grossness of the world is apparently acceptable.

What do I want to do? My family and I have for four years now studied and dreamed about a way of life separate from all that we see going wrong in this world. All we want to do is salvage the orphaned, the hurt, and the problem moose, and put them to good use.

Through our extensive research, we have concluded that not only is this quite possible, but is exactly what is being done successfully in other countries, such as Russia. It may not be the biggest breakthrough since man on the moon, but it is definitely an option to the present policy of allowing moose to be hunted and killed only.

The Alaska Department of Fish and Game has this attitude that our wildlife should not be used commercially, or be privatized. But again, as I look out on this world, I see big game guides making millions carting people around, and getting paid to kill, kill, kill. I am also aware of people being allowed to display these animals, and charging others to have a look. Then, how about the research facilities that have for decades been allowed to privately conduct every imaginable kind of experiment on these animals?

Why can these people exploit our wildlife, and I cannot? While game farming science doesn't hold the moose to be the most economically viable species, in my view it is the most loved and desirable and enjoyed of them all. Most game farms in Canada keep a couple around, just because. And the fact that we've not yet realized how to capitalize on the potential, doesn't mean the potential is not there.

It's known for a fact that moose came as easily as calves, that they give the most nutritious milk on earth, that they will pull a sleigh or a cart, that they can be ridden in places other animals would find inaccessible, can breed at one year of age, and generally throw twins from the second

calving on.

When raised in captivity, they grow year round, and achieve larger size. When castrated they don't participate in the rut and continue to gain weight. They can provide a reliable source of meat to a family, and don't require watering in winter like all other farm animals. The antlers, hides, hooves, and bones provide materials for crafts and clothing, and yet it is not legal to raise them here in Alaska.

The Alaska Department of Fish and Game says that raising them would ruin the "Alaskan experience" for our visitors, and that they simply can't be raised. I can't believe that this one department in our corrupt government has been allowed to become so powerful. They are a dark cloud over this state,

and I wish the people would wake up and see the truth.

I suppose if I were Oscar Meyer, I would get somewhere, but I'm not. I'm just a little ol' Alaskan. Do you have to be a multi-national corporation or millionaire to develop an industry, or even a way of life, in Alaska today?

Our legislators have all thrown in the towel, and won't even dispute what our so-called experts say. However, they have an opportunity with two bills legalizing the raising of moose, and predictably, Fish and Game will say no. Who owns this state anyway, and who owns all the wildlife and other renewable resources?

House Bill 478 and Senate Bill 216 would do more than legalize moose and caribou farming. It would give people like us a purpose and something to do. Are our



children going to be forced to seek their fortunes elsewhere? Or are we going to open opportunities to enrich their lives with the resources with which this state has been blessed? Or is Alaska just for the rich and powerful?

I am sick of hearing no, of denial and discrimination. I'm tired of getting nowhere and numb from the cold evasiveness of politics as usual. I'm not wanting any damned welfare or privileges: I'm not looking for a hand just a hand.

I see opportunities and I've sought them, but not got them. This country was built by dreamers and doers, not the passive and the politicians. Exxon us and BP you! Funny, they seem to get to do whatever they want to do. It doesn't matter what it takes, whether it's a park or refuge or forbidden place, they seem to run this whole damn human race.

Please consider what I've had to say; there is a better way!

Doug Welton is president of the Alaska Game Rancher's Association, a thirteen year resident of Alaska, and an advocate of the legalization of moose farming for the past four years.

Alaska could benefit from game ranching

Of Alaska wilderness and wildlife, relative to the rest of the nation, there is a very great amount. Empty lands? Not necessarily.

After the large acreage transfers authorized under the historic land settlement act have been accomplished, the state of Alaska will own about 104 million acres, about 28 percent of the total Alaska land mass; Alaska Native people will own an additional 44 million acres, about 12 percent, or roughly 1/3 of all Alaska. Together the non-federal lands will represent a bit more than two-fifths or 40 percent of the total. The federal government will retain ownership of nearly three-fifths or 60 percent of Alaskan lands.

This vast acreage apparently is dedicated almost entirely to wilderness and wildlife purposes. Initially after transfer much of the land in Native private ownership will remain essentially wilderness with minimum use by people. Of the state's portion, nearly 3/5 has been classified for fish and wildlife. A tiny amount has been classified for agriculture, about 2 percent, and only 16 percent for commercial forestry production.

Then an inescapable fundamental top-priority question facing all Alaskans, including Native Alaskan com-

munities, is working out some reasonable balance in the use of their lands.

To resolve the fundamental "All Alaska" question will take more than emotionalism, fixed ideologies of any extreme, and selfish specialized interests, however attractive out of context, or in isolation from consideration of the general good.

Any acceptable resolution will require a painfully realistic assessment of potential land resource uses, creative concepts for immediate, mid-term, and long-range uses that fit into a reasoned and well-balanced design for utilization. Truly this is a process without end—so long as the human mind and spirit prevail on earth. There is no quick fix in prospect.

Given the above, is there a common-sense approach to bringing Alaskan wilderness and wildlife into greater production for the benefit of residents in an all-inclusive sense? That is what our endless quest for an answer to our land issue is all about.

The goal of leaving a place better than we found it, over-simplified for clarity, exemplifies husbandry-at-its-best of the natural resources available to us, in reality merely lent to us for a brief time.

For some of the state's marginal



William R. Wood

Views expressed here do not necessarily represent those of the Daily News-Miner

lands, including private ownership lands, game ranching holds much promise. It may offer the soundest approach to bringing a portion of Alaskan wilderness and wildlife into greater production to enhance the several "good-life" styles we enjoy in the North.

A strong case can be made for game ranching in Alaska, particularly in the Interior, but also in Southcentral and southwestern and northwestern areas. In Southeast Alaska the game ranching principle already is being used successfully in the fishing industry. The good case for can be spelled out readily in outline from successful game ranching operations elsewhere. Such experience and state-of-the-art practices must be examined closely

in relation to the particular Alaska project or series of projects that undoubtedly will be proposed this year and subsequently.

For discussion, to whom does Alaska state wilderness wildlife belong? All of us? Then how can we best preserve it and increase its productivity in multiple ways for the common good?

How can a reasonable portion of Alaska state and private lands be set aside for game ranching, beginning perhaps with a pilot project or two?

There are several types of game ranching operations, including but not limited to: those government-operated for preservation of species and tourism, with culling of herds open for recreational hunting, including trophy taking, on a limited permit basis; private club-type operations with access limited to members and their guests only; and private operations for profit, featuring a wide range of income-producing possibilities, from meat production and trophy taking to general recreation, sightseeing, picture taking, and esthetic fulfillment to be derived from wilderness and wildlife.

Paramount for consideration of continued success for private enter-

prise game ranching is not only the preservation but the enhancement of scientific principles of both wilderness and wildlife. Attempts at "exploitation for profit only" are doomed to fail promptly. An enlightened, well-informed people will not tolerate them.

To what extent might limited game ranching, especially in Interior Alaska, relieve pressure upon other wilderness lands and their wildlife? That pressure is building up dramatically. In particular, might a game ranching pilot project featuring Delta buffalo serve more than one good purpose, including resolution of the pre-emptive farmer vs. buffalo conflict in the Delta agricultural area? Both/and rather than either/or.

Let's think this game ranching prospect through together beginning with a positive and constructive analysis of possibilities as well as problems. Let's reason together and act sensibly for the general good without political posturing or attempted manipulation. Is this too much to ask in face of the number one priority basic issue of land utilization in Alaska?

There is urgent necessity here that demands immediate attention.

FAIRBANKS NEWSMINER 17 NOV. 1982

3/12/93

Let ag dept be responsible for alternative stock health

A bill in the Washington State Senate looks like a smart way to govern the domestic production of deer. It would rely more on sound science than would a House bill in the area of alternative livestock.

In the last few years, diet-conscious Americans have discovered that venison raised on farms is delicious and low in calories. Several years ago, a group of enterprising farmers in Oregon, Washington and British Columbia decided to cash in on a growing demand for this new product, which they found could be produced at about the same cost as beef but would sell for three to four times as much.

A marketing cooperative was established and the outlook was promising, but the Washington state Wildlife Department and Wildlife Commission last year used false information to justify an order that banned the import of deer from farms in Oregon and British Columbia for slaughter at a specialized USDA-inspected plant in Burlington, Wash. A ban on propagation of deer on Washington farms was overturned by a federal judge, but the ban on imports remained. Permanent regulations adopted in January permit farming of reindeer and fallow deer but outlaw sika deer.

Two bills before the Washington Legislature would give statutory protection to the alternative livestock industry. Deer farms would be regulated primarily by the Department of Agriculture under both bills, with a limited role for the Wildlife Department.

House Bill 1135 specifies that reindeer

and fallow deer and Rocky Mountain elk would be designated as alternative livestock. Other species could be added if agreed to by the two departments. A three-member review board could make recommendations, but the Department of Wildlife would have virtual veto power over adding more species.

Senate Bill 5418 would allow farming of any species except those the two departments agree should not be farmed because they might pose a threat to native wildlife. The Senate bill specifies a review board to include chairs of the state veterinary board of governors, the Washington State University College of Veterinary Medicine and the WSU Natural Resource Science Department.

The Senate bill would be best because it would ensure that decisions would be based on sound science rather than the questionable, one-sided criteria used by the Department of Wildlife.

Legislative testimony has shown that disease problems on deer farms have occurred only in states where they were regulated by wildlife agencies. There have been no problems where animal disease control on deer farms is handled by state departments of agriculture.

The state veterinarian in the Washington Department of Agriculture has done an admirable job of protecting native wildlife as well as domestic livestock from tuberculosis, brucellosis and other animal diseases.

It's time for the Department of Wildlife to step aside and let the job be done by people who have demonstrated that they know what they are doing.

The preservation movement is a lucrative and will continue to be as they can brainwash supporters into believing the world will come to a halt if they don't keep the mountains rolling in.

However, "Friends" support such monstrous the Oregon Land Conservation and Development Commission are just as much of an agriculture.

The next step after will be an agricultural act where each will be told exactly farm, when and if to fertilizer or pesticides used, and eventual crops to grow. The goal will be to pay taxes.

The free-enterprise with private property built the United States ism will destroy it.

George Paul Cornelius, Co

Grazing fee hike countereconomic

To The Editor

In President Clinton news release, he told that he wanted to raise fees on public lands would force a lot of ranchers out of public lands.

President Clinton realize that most of the land in the Western very marginal, lands not worth homestead were taken back in by

These lands produce to 150-pound lighter calf than the more private lands. With calves at near \$1 per ranchers running a

The Anchorage Times

Publisher: BILL J. ALLEN

"Believing in Alaskans, putting Alaska first"

Editors: DENNIS FRADLEY, PAUL JENKINS, WILLIAM J. TOBIN

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Let moose roam loose

TUCKED AWAY in the House Resources Committee awaiting hearings is a reprehensible piece of special interest legislation that runs counter to most sound game management principles.

The measure, already approved by the Senate, would clear the way for moose farms in Alaska to benefit only the few people who are pushing to make a buck at our expense.

This bill, which crawled from beneath a rock as SB46, would allow private individuals to acquire from the state "surplus" moose to begin fenced-in game farms.

The Alaska Department of Fish and Game, up to a few weeks ago, vociferously opposed such legislation for a variety of very good reasons. Those include:

- Large, fenced tracts would interfere with the movement of other species in the area.
- Moose are not herd animals. For the most part, they are solitary.
- Biologists say the most productive habitat in Alaska can support only six or eight moose per square mile in the long winter months, and Canadian researchers say packing them together increases disease transmission which could infect wild stocks.
- It would increase the poaching and sale of meat from wild moose.
- The agency would have little say in regulation of moose farming schemes.
- The economics of moose farming make it almost a certainty such ventures will fail.

And, presumably, we could in the future see moose tied up for viewing at tourist traps along the highways of Alaska, just as other states have had bears, alligators and other wild animals caged and subjected to this form of cruelty.

Before Alaska decides to go along with this scheme, it should note there are no viable commercial moose farming operations anywhere, and for good reason. And many states that have allowed such ventures with other species now find themselves searching for ways to get rid of them. In the former Soviet Union, they tried for decades to domesticate moose before the idea was abandoned as impractical.

Oddly, the Department of Fish and Game — adamant until a few weeks ago on the moose farming question — now is strangely neutral on the subject. Maybe having its budget trimmed by \$3.3 million in Senate Finance played a role, or maybe it was having its world-class Moose Research Center in Kenai zeroed out of the budget.

If the agency that is supposed to be the authority on moose in Alaska now finds itself somehow choked into silence by Senate purrestrings, let us speak up in its behalf.

Game ranching is a lousy idea designed to benefit a few while costing the rest of us in resources, time and money. If you value Alaska's wildlife resources, let your legislators know.

Ap. 9, 1993

The Elk-Ranch Boom

By Ted Williams

Elk ranching is thriving. But is it a livestock bonanza or a wildlife disaster?

FEBRUARY 13, and already spring is busting out all over central Colorado. Flights of horned larks, carried like cottonwood leaves on the sweet Chinook wind, swirl over muddy pastures; and along the creek beds, burbling redwings ride bobbing cattails. In front of us Long's Peak rises white and cold; behind us red sandstone cliffs are washed in

muted sunlight. With my companions—Rick Kahn and John Seidel of the Colorado Division of Wildlife—I hike up into the realm of the wild elk. But now it is the realm of captive elk, too.

The yearling bull pushes his glistening black nose through the wire fence and browses the collar of my nylon parka.

When I step back he rolls his eyes, showing the whites the way wild elk do, then butts me with the painted stumps of his amputated antlers. A plastic square with a "1" on it dangles like an automobile air freshener from his left ear, and both ears carry punch-through metal tags. His neck is bare with mange.

Not having been bottle-fed, the other elk in the pasture hang back; but their coats are ratty, too. Human-habituated cervids are not, as the ranchers like to call them, "domesticated," nor will they be for thousands of generations. So while they may appear calm as cattle, there's a stress factor that shows up in their general condition. Further, they seem to have difficulty assimilating trace elements, and parasite



TRICK DAVISON

loading is heavy.

Like most biologists, Kahn and Seidel don't like to see wild animals confined, but neither are they fighting elk ranching. It's too late for that. Instead, they are trying to work with the new industry in order to protect Colorado's 200,000 free elk—the most of any state or Canadian province. Kahn had apologized for taking me to this and another ranch because

maladies and enhance sexual prowess. The state commissioner of agriculture was on hand to welcome us to the "Elk Capital of the World," so called for its free, not captive, elk. He was, he said, "proud" and "excited" to be associated with an industry so "dynamic" and "innovative," one that "epitomizes" agricultural diversification and has "blazed a trail" for the rest of agriculture.

dynamic and growing. And let me tell you, you just have to grab and get ahold of yourself because the speed at which these things are happening is phenomenal."

How right he was. In 1990 elk breeders powwowed to set up an organization that would promote their mutual interests, i.e., procuring a bigger chunk of the Asian antler market. Then there were 17 members. Now there are 700,

and they control about 85 percent of the 20,500 captive elk in North America, 17,000 of which are incarcerated south of the Canadian line.

Sounds impressive until you

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consider that there are 1 million European elk, better known as red deer, under fence in New Zealand.

Later there were speeches, seminars, movies, open bars, exhibits, and a lavish banquet of elk steaks—the best red meat that ever passed my lips, after Yankee whitetail. There were auctions, too, in which members bought live brood stock from around the country, shown live by satellite on TV screens, and elk-product gew-

We had lots in common, these elk ranchers and I. For instance, we adored wild cervids and were bored by domestic ungulates. I liked everyone I met. They struck me as more animated and, well, smarter than other stockmen; and certainly I couldn't blame them for wanting to diversify. Environmentalists had been nagging them about their cattle, trying to push grazing fees on public land closer to fair market value and chanting "Cow Free by '93." With America souring on beef and even cowboys, a light bulb switches on in the intelligent rancher's head when he looks out his bedroom window and sees a wild

animal worth \$8,000 grazing on the far side of his barbed wire.

Recently, environmentalists have been nagging ranchers about their elk, too. When NAEBA members asked for my opinions, I told them I hadn't come to Colorado to lecture but to listen and learn. When they pressed, I admitted to harboring grave concerns about the commercialization and privatization of any native fauna—an approach that has failed spectacularly in Europe and that clashes with 75 years of successful wildlife management on this continent. Amidst all the excitement and festivity and happy, positive, can-do attitudes, it pained me to throw in with the forces of negativism. But I suppose that's the lot of environmental reporters these days.

Regular reporters as well, according to the Colorado Elk and Game Breeders Association, whose officers I met at the convention. "As we all know, the press loves to



they were so well managed as to be not "representative." The others, though, were too far out of Denver for us to make it back to the downtown Radisson in time for the grand opening of the North American Elk Breeders Association's annual convention.



Above: Antlers are cut from an anesthetized elk with a common wood saw, then sold to Asian buyers for use in medicines and aphrodisiacs. Left: A de-antlered bull in Alberta, Canada. Opposite: Elk, with antlers in the velvet-covered stage, feed on hay at a ranch in Checkerboard, Montana.

The NAEBA convention's theme was "Elk! Livestock of the Future." But unlike livestock, captive elk usually aren't killed; instead, their antlers are cut off in the blood-engorged, velvet-covered stage and consumed by Asians in the belief that they ward off

Association president Sam Withiam, a beaming, white-haired Santa Claus of a man, warned about the forces of negativism that want "to see this industry fail and would enjoy seeing it fail." The association, he declared, is "an agent of an industry that is

gaws lofted about the room. President Withiam offered "two ampoules of semen rated 'excellent' in motility, volume, density, and morphological evaluation." This from his prize bull elk "Northern Exposure," sired by the great "Kojak."

"Should be read by every nature-oriented citizen."

—Roger Tory Peterson

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distort and emphasize the negative," proclaims the group's publication, *Elk Family News*. The *Denver Post* had reported that two former members were "fined" \$6,450 each after the state accused them of luring 25 free elk into pens. The real story, reveals *Elk Family News*, is that the two ranchers "each donated \$6,450 to Operation Game Thief." Technically correct, although the "donation" was part of an agreement in which they pleaded guilty to illegal possession of elk for sale.

"Never trust the media's intentions," instructs NAEBA's quarterly magazine, *North American Elk*. And by all means keep it away from "velveting" operations (cutting antlers in the marketable "velvet"

able resource goes from excellent to good to poor to worthless. Do it right and you can make as much as \$110 a pound. Sometimes antlers get bacteria inside them, but you can sort these in the drying room—with your nose. ("It's the rottenest stink you ever smelled," said a convention panelist). Throughout the week I learned lots more about velveting, but it is hard for the public to comprehend its true nature. So hard, in fact, that when I attended a session on the subject I was asked to turn off my tape recorder.

So I took careful notes during a session entitled "Starting an Elk Farm—The First Two Years." The panel included a hunting outfitter who spoke about the booming trade in "shooter bulls," geriatric elk shot in enclosures by trophy hunters [see "Canned Hunts," January-February 1992]. "It's a manage-



Working from the back of a pickup truck, Dean Baumann feeds oats to the elk herd at his Alberta ranch, where he has built a \$275,000 "velveting" facility for cutting antlers and where he has hosted a major antler auction.

ment decision," he explained. "If he's absolutely prime, has a Boone and Crockett rack, I'll pay twelve thousand dollars for him. Is this year worth a gamble on keeping him another year, when you can put twelve thousand dollars in your pocket?"

I learned even more at the bars and display booths. But when I asked about the dangers to free cervids posed by genetic swamping, disease, and the new infrastructure for laundering stolen wildlife, the ranchers got tight-lipped and testy. "The people worried about that stuff never had shit on their boots or signed a paycheck on the back," boomed NAEBA board member Bob Spoklic, of Antelope, Montana, a square-jawed man with green eyes and steel wool hair who looks as if he just stepped off the *Guns* set. In addition to annually harvesting 200 antlers from his own herd (more than any operation in the United

stage). Otherwise, the public will be reading such descriptions as this, from the October 16, 1989, *Albuquerque Tribune*: "The body of the drugged animal leaps. Its hooves paw the ground. . . ."

Velveting, at least as it is now practiced by most NAEBA members, is no more inhumane than any of the other things people do to livestock. The bulls are thoroughly anesthetized. Occasionally they are turned on their sides so more of the highly valued blood, from which the medicine supposedly gets its potency, will drain into the still spongy antlers. Sometimes Asian buyers hover around, asking to imbibe the raw liquid as it spurts from the antler stumps. ("I can't stand that—to see them guys drinking that," one rancher told the *Tribune*.)

You have about four days to velvet, during which the quality of this renew-

States), Spoklie canvasses the northwestern quarter of the nation, from Minnesota to Washington, collecting frozen velvet. He is honest, hardworking, and well respected in the industry. Recently he installed his own drying

The antlers are cut off in the blood-engorged, velvet-covered stage and shipped to Asian markets.

facility and staffed it with Koreans, some of whom were brewing up pungent antler tea at a convention booth. "Who are we to say it doesn't work?" he said.

But Spoklie hasn't used the stuff. I have. Sunny Chae showed me the ingredients—thin slices of dried antler perched like burned potato chips on a rat's nest of twigs, leaves, bark, and berries. "No," she said when I pointed suspiciously to the black, shiny pellets, "they are not elk droppings." She prescribed the \$400 dosage; I opted for the \$10 shot. Even this, said Sunny Chae, was a powerful aphrodisiac, and more important to me at the moment, it would cure my cold.

"Is your wife with you? This could get ugly," commented the rancher behind me as I pinched my nose and gulped. She wasn't and it didn't. During the rest of the evening I felt no more passionate than usual, and the next morning I awoke with clogged sinuses.

By far the most vocal opponent of privatization and commercialization of wildlife—the man elk ranchers love to hate—is Valerius Geist, 54, the ecologist who directs the Environmental Sciences Program at the University of Calgary, in Canada. Whenever an interview started to bog down, I'd bring up his name. It was like whistling "Marching Through Georgia" to the Savannah Elks Club.

"Valerius Geist! I'll tell you, the man is crazy," cried Welch Brogan, 84, when I phoned his ranch, in Corwin Springs, Montana. "The man is a radical."

The "Canadian Update" session was positively abuzz with talk of the vile and evil Geist. Wilf Jurke, president of the Saskatchewan Game Farmers Association, explained how this "self-acclaimed alien from another planet" had ir-

the Canadian Wildlife Federation to raise \$1 million to sabotage game ranching and was helping it spread "half-truths and total lies," and how his group had "contacted one of the best lawyers in Saskatchewan" to write Geist a cease-and-desist letter.

Scarcely anything that walks or haunts this earth frightens Val Geist, least of all gored elk breeders brandishing puffy letters. His strong spine and custom of saying precisely what he believes make him aberrant in the wildlife business, where the meek and manageable rise fastest and highest. "Do we endorse the bestial cruelty to elk on Canadian game ranches in order to fatten the profits of whorehouses in Seoul, Hong Kong, Bangkok, and Tokyo?" Geist demanded of the Canadian minister of the environment.

Geist may be a radical, but he is not, as his enemies contend, a crackpot or a charlatan. One of the most respected wildlife professionals on the continent, he has worked with Ian McTaggart-Cowan and Konrad Lorenz, serves on all manner of international committees, and has advised foreign governments. "The consequences of game ranching were predictable and have been borne out entirely so far," he wrote last November, "only earlier and worse than predicted, even by pessimists."

What does frighten Geist is red deer, the European subspecies of our elk—at least when they are shuttled about the planet in the deadly shell game humans play with plants and animals. Red deer are redder than elk, thinner in the shoulders and hips, with antlers that rise more vertically. They don't "bugle," they "bellow"; and when they duel they don't lock up and push, they thrust and parry. Bull elk refuse to fight them. In fact, if a rutting elk hears a red deer bellow in another pasture, he'll lie down. So when an escaped red deer stag meets a band of elk, he absconds with the females and breeds them all.

At Wildlife Division headquarters, in Denver, I sat at Rick Kahn's desk as he showed me a computer model of what would befall 500 Rocky Mountain elk if one were to unleash upon them 10 red deer. In 80 years, 95 percent of the herd

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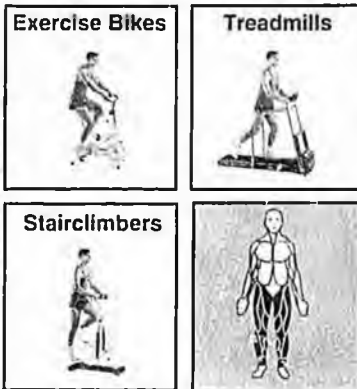
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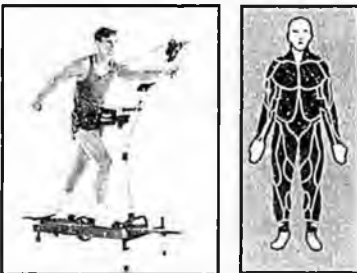
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wouldn't be elk anymore. They'd be something else, something less—mongrels. This disturbs Kahn and his colleagues, because they know that the only real guarantee you get with "game-proof" fencing is that sooner or later it

do in the wild," he pronounced. "If they interbreed, what are they going to do?" There was nothing left for me to say. We were speaking different languages.

One thing they might do, even if interbreeding doesn't occur, is contaminate elk with a nasty little nematode called *Elaphostrongylus cervi*, which, in the infective stage, lives in snails and slugs. Red deer in Europe and New Zealand accidentally



A worker unloads a pile of "hard" antlers at a warehouse in Ennis, Montana. Although not as highly prized as those in the velvet stage, these antlers are sold to South Korean pharmaceutical firms.

ingest these slugs and snails with their browse. The young worms penetrate the gut wall

will be breached by water, wind, snow, fire, vandals, or free elk sparring with captives; and because they see in their native elk a treasure more valuable than trophies, venison, or even antlers, a treasure that belongs not just to Colorado but to the planet.

So in late 1990 they set about testing Colorado's captive elk for red deer genes. Fourteen percent of the animals checked turned out to be hybrids. These the state ordered deported, paying the ranchers the difference between what they could hawk them for and their alleged worth. The bill came to half a million dollars.

But elk ranching can't really make it in North America

without red deer. Or so says the man who should know best—Mike Bringans, the young, affable vet from New Zealand (and more recently Ontario) who supervises the care and artificial insemination of some NAEBA elk. Reds, he told me, are cheaper, gentler, and more adaptable to diet. When you cross them with elk, "hybrid vigor" ensures faster growth. "What about genetic pollution of free elk?" I asked.

"Tell me what genetic pollution by an animal that looks like an elk is going to

and migrate to the spinal cord, brain, and muscles, where they mature and lay eggs. Larvae flow with the blood to the lungs and are coughed up in sputum, swallowed, and shed with the feces, which then attract slugs and snails. Red deer can usually handle *E. cervi*. North American cervids have no natural immunity and very likely can't.

So last November ranchers and game managers were appalled to learn that the test by which they'd been confidently certifying red deer *E. cervi*-free and shipping

The only real guarantee you get with "game-proof" fencing is that sooner or later it will be breached.

them around the continent was unreliable. But at least the hosts and maybe the worms were being kept within game-proof fences. Except, of course, around Colorado's Eagle Rock Ranch, where a flash flood had taken out the game-proof fence, and where red deer, along with all sorts of other weird exotics used in canned hunts, were reproducing in the wild. Then in October, *E. cervi* showed up in three red deer held in New Brunswick. Solution: The three were immediately killed, and the remainder of the herd was

PATRICK DAVISON

taken to Ontario for routine slaughter.







All the red deer arrived safely in Ontario—whereupon 91 escaped, taking up residence in the woods before eventually being hunted down and shot by game managers on foot and in helicopters. No *E. cervi* were found in the carcasses. If any infected feces were deposited, they will remain contagious for three Canadian winters.

Wildlife advocates west of the Great Plains are even more terrified of *E. cervi*'s cousin, the North American brain worm. Eastern white-tailed deer, which evolved with brain worms, aren't bothered by them. However, probably because the Great Plains are too dry to support many slugs and snails, brain worm doesn't occur in the West. If it gets there, it will devastate mule deer, elk, moose, caribou, mountain sheep, and mountain goats. So after Alberta rewrote its Wildlife Act to permit private ownership of public wildlife, it required game ranchers wishing to import stock to certify that it came from somewhere west of brain-worm land. Unfortunately, reports Margo Pybus of the provincial Fish and Wildlife Division, some of them cheated, laundering eastern game through western ranches. As a result Alberta closed its borders to all captive big game in 1988.

Another nasty creature threatening North American wildlife is the bacterium that causes bovine tuberculosis (TB). Elk, moose, and caribou are especially susceptible because they evolved in the dry, cold climate of Siberia, where pathogens were scarce and strong immune systems superfluous. Captive elk spread TB by mutually grooming open sores and by dripping contagious saliva, feces, pus, and probably urine.

"I don't know what we'll do if TB gets established in wildlife populations," remarked the thoroughly unexcitable Mitchell Essey, senior staff veterinarian for the USDA's Animal and Plant Health Inspection Service. "No one knows how we'd control it if it got into elk herds like those in Yellowstone National Park. The potential ramifications are almost inconceivable." Unfortunately, the USDA has no jurisdiction over cervids because they're not "livestock." Responsibility lies with the states, which don't like to dispatch TB carriers because they fear the courts will force them to pay compensation. Two years ago ranchers and game

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managers were appalled to learn that the test by which they'd been confidently certifying elk TB-free and shipping them around the continent had been detecting only about 20 percent of the cases.

Having been in the business 46 years, Welch Brogan is the grand old man of North American elk ranching. He says he's had problems with some of the statements the state veterinarian has made to the press about his TB-infected elk, now under quarantine. It has, however, been documented by U.S. and Canadian wildlife and health authorities that Brogan shipped 18 elk to Alberta in 1988, and that they were later diagnosed with TB. Some U.S. and Canadian officials believe that TB had arrived at Brogan's ranch a year earlier via a shipment of 27 infected elk from Nebraska.

During the last two years Canadian officials have found TB in pigs, cattle, bison, and deer. Infected animals destroyed to date, costing the Canadian government \$10 million in compensation, include 2,200 elk—close to half of Alberta's captive herd. At this writing the disease has been seen in captive game in 5 Canadian provinces, from New Brunswick to British Columbia, and 14 states, from New Jersey to Oregon.

But the threat extends beyond livestock and wildlife. The disease can be contracted by humans who handle a host, inhale its breath, touch its body fluid, or drink its unpasteurized milk. It used to be rampant in its native Europe, where, according to a report in *Time* magazine, it may have caused lesions on Joan of Arc's brain and other organs, bringing on her visions and loss of menstruation. The recent outbreak in Alberta quickly spread to farmers, vets, postmortem technicians, meat inspectors, and tanning-plant workers, most of whom were put on preventive medication but at least one of whom developed the actual disease.

If TB does get a toehold in the wild, Geist predicts, then "in national parks tame, infected elk, dripping contagious body fluids, will mingle with the public on golf courses, lawns, picnic grounds,

campgrounds, promenades, even school yards"

Because Yellowstone elk play in Brogan's backyard, wildlife officials were hoping he'd tend his game-proof fences. Alas, there has been ebb and flow between Brogan elk and public elk. Brogan told me he's been offended by statements made by the local game wardens, who, like the state vet, "get carried away with stories" when they talk to the press. However, the Montana Sixth Judicial District Court told this story as a "finding of fact": "The defendant [Brogan] within a few minutes after the game wardens left his home drove up through the 'cow' pasture to open the gate on the triangular pen and herd out the wild elk he had lured onto his premises . . . by leaving the gates open, baited with hay." On September 5, 1991, Brogan was found guilty of "capturing over eighty head of wild elk for use in his game farm business."

Brogan is the exception, not the rule. Were he an NAEBA member, he could be summoned before the organization's board of directors for possible reprimand, suspension, or expulsion. In all aspects of their privatization and commercialization of public wildlife, elk ranchers of the NAEBA want desperately to be responsible and ethical. The tragedy for them, as well as for wildlife and the public, is that the nature of the business makes this impossible.

According to the state of Colorado, TB bacteria allegedly hitched a ride from the Brogan ranch to the Royal Elk Ranch in Powderhorn—another atypical operation whose owner, accused by the U.S. government of passing cocaine and converting his barn into a "hydroponic laboratory for the growing of marijuana," also is not an NAEBA member. The point, though, is that pathogens, parasites, and alien genes don't care who's typical and who isn't.

Recently the Division of Wildlife gravely offended the NAEBA by showing slides of TB eradication at the Royal Elk Ranch, where it killed and burned 52 animals. In one photo a firestorm rages around the carcass of a diseased bull. But through the flames, standing as tall and beautiful as Joan of Arc, is a pair of perfect antlers. Antlers worth perhaps \$2,500. It was the most powerful image I took home with me. ♣

Legislators want to give away the moose farm, and much more

Senate Bill 185 means as much as \$2 billion to the state treasury. Senate Bill 46 is worth zip, unless you dream of being a moosepuncher. Guess which one has passed three committees and a floor vote, and which one is resting on the bottom rung of the committee ladder.

That's right, good old 46, the all-important legislation to allow moose farming, is streaking along like a scalded cat. Poor old 185, which would prevent oil companies from stalling tax disputes until the clock runs out, has been sucked backward into the Senate's Labor and Commerce Committee.

Some people argue this is just Alaska's peculiar form of Republican philosophy: Socialism for the rich combined with contempt for the public interest. But I think a couple of other factors are involved. One is that this year's coalitions have allowed a lot



MIKE DOOGAN

of people who are inexperienced or incompetent, or both, to gain power. The other is these people have bungled the state's finances so badly they think they won't survive the election. So they're doing as many favors as they can on the way out the door.

Nothing shows this more clearly than oil-related legislation. Here's a sample:

- Stalling on SB 185, which at best weakens the state's negotiating position and at worst lets companies walk away from tax disputes scot-free.

- House approval of the large-block leasing bill, which allows oil companies to tie up as much as 2 million acres for as long as 20 years without having to bid, or pay, for the leases. Arco Alaska Inc. helped write the bill and Rep. Joe Green, R-Arco, was its chief defender.

- Senate approval of a bill lowering the bond oil companies have to put up in case they pollute. This is an invitation to fly-by-nighters.

- Senate Resources Committee approval of an oil company tax break worth \$114

million over five years. The change to the so-called 470 fund would take that money away from oil spill prevention and response programs. Guess five years is as long as senators can remember the Exxon Valdez.

- The quick attention paid to the Hickel administration's plan to cut back on oil lease sale reviews. The division of oil and gas has been doing a lousy job preparing for lease sales, and the courts have said so in four separate cases. Instead of cleaning up his act, division director Jim Eason is asking to have his job made easier.

A couple of other rank pieces of resource legislation come to us courtesy of the Fairbanks Senate delegation. One would give 1 million acres of state land to the university to do with as it pleases. Why? Well, university vice president Brian Rogers claims the federal government once promised the university 400,000 acres. I guess the extra 600,000 acres is inflation. The other would allow forest land to be leased without requirements to reforest. Why? Well, somebody thinks there's money to be made in Interior white spruce, and once those trees

are cut it'll be many, many years before new ones reach the same size.

Whatever you do, don't forget moose farming. Probably thousands of good jobs in the moose-farming industry.

Put the best possible face on this. Kowtowing to industry shows that legislators think no price is too high to pay for jobs, no matter how destructive the industry or how few, short-term or poorly paid the jobs.

Or take the cynic's view. The legislators in power would much rather just give the oil industry a big whomp of money, like Ed Dankworth did in the early '80s. But gosh darn it, they can't afford it. So, instead, they've decided to have a resource fire sale.

If they're not going to be back, what do they care? And if they're going to try for re-election? Just think of those campaign contributions as the brokers' fees.

Mike Doogan's opinion column appears in the Daily News each Tuesday, Friday and Sunday. You can hear more of Mike Doogan on the Daily Newsline. Call 277-1500 and enter code 2205.

Farmer starts reindeer ranch in Mat-Su

The Associated Press

WASILLA—Under cover of midnight darkness a vintage DC-3 set down at the Palmer airport. Its cargo was 22 reindeer fawns flown south from the Beaufort Sea coast in Canada.

Flying the animals to the Matanuska Valley last week was just one step taken by Tom Williams in his effort to start a reindeer farm on 600 acres at Point MacKenzie.

Williams said he went to Canada because his plans to move 300 ailing reindeer from Hagemeister Island near Togiak to Point MacKenzie has run into opposition on a number of fronts.

Several Native groups want to keep the reindeer in southwest Alaska and others are concerned the animals could be carrying disease.

"The money I've spent buying and flying these animals from the beach of the Arctic Ocean of Northwest Territories could have been spent saving several times as many reindeer from Hagemeister Is-

land," said Williams.

Handler Lloyd Neiman of Palmer had stayed with the reindeer on a deserted beach near Inuvik in the Northwest Territories for 51 days to feed and tend them during a federally mandated quarantine

period.

Eventually the reindeer were loaded into the plane and taken to Anchorage, where they passed through Customs before flying to Palmer, and from there by truck to Point MacKenzie.

VOTE Shirley for Senate for SURE Change



SHIRLEY KNIGHT-MALKUCH SENATE SEAT P

- Shirley wants to listen to your views and willing to meet with groups or individuals.
- She's a grandmother of 21 children and wants quality education for all ages.
- Shirley also supports longevity bonus for all the pioneers that built Alaska!

"A NEW FACE FOR A NEW SEAT"

Running on the Republican Ticket

Paid for by the committee to elect Shirley Knight-Malkuch
P.O. Box 73050 Fairbanks, Alaska 99707, 451-1900



Alaska State Legislature

Please enter into the record my testimony to the HOUSE RESOURCES
committee name

committee on SB 46 MOOSE FARMING, dated 2-18-94
bill/subject

I WOULD LIKE TO GO ON RECORD AS SUPPORTING THIS BILL. I BELIEVE THAT MOOSE FARMING WOULD HELP INCREASE WILD HERDS AS PEOPLE WOULD BE ABLE TO GET THEIR MOOSE IN OTHER WAYS. THIS MAY ALSO HELP SLOW DOWN POACHING AS "DOMESTICATED" MOOSE COULD BE MADE AVAILABLE YEAR ROUND.

I DO NOT AGREE WITH SEC. 3 AS IMPORTATION OF SOME MOOSE MAY BE NECESSARY TO PREVENT INBREEDING AND HELP SOME MOOSE FARMS GET STARTED AS THERE MAY NOT BE ENOUGH "SURPLUS" MOOSE IN THE BEGINNING. INSTEAD THERE SHOULD BE AN IMPORTATION LIMIT.

I AM VERY INTERESTED IN BECOMING A MOOSE FARMER AND AM THEREFORE DEEPLY INTERESTED IN SEEING THIS BILL PASSED.

Signed: Cherylene Walker
Testifier

Representing (Optional)
HC 62 BOX 5360 DELTA JCT, AK. 99737-9501
Address

897-1024
Phone No.



Alaska State Legislature

Please enter into the record my testimony to the House Resources
committee name
committee on SB 46, dated 2/18/94
bill/subject

I would like to go on record as being in favor of SB 46.
In areas that face heavy hunting pressure, moose farming would
be a good alternative.

Signed: Tim. Weld
Testifier

Representing (Optional)
HC 62 Box 5360 Delta Jct. AK. 99737
Address
895-1024
Phone No.



Alaska State Legislature

Please enter into the record my testimony to the House Resources
 committee name
 committee on SB 46 , dated 2/17/94
 bill/subject

TAKING A PUBLIC RESOURCE FOR PRIVATE EXPLOITATION IS NOT ONLY IRRESPONSIBLE MANAGEMENT OF THAT RESOURCE BUT IT FLYS IN THE FACE OF REASON CONSIDERING EVERY KNOWN ATTEMPT TO "FARM" MOOSE HAS FAILED. THE ONLY SUCCESSFUL GAME RANCHER IN THE STATE OPPOSES THIS BILL AS DOES THE ALASKA DEPT. OF FISH & GAME AND THE ALASKA ENVIRONMENTAL LOBBY. THE DEMONSTRATED FACT THAT MOOSE FARMING IS NOT A VIABLE ENDEAVOR SHOULD BE REASON ENOUGH NOT TO PASS THIS BILL. PLEASE LISTEN TO AND FOLLOW THE ADVICE OF THE ACCREDITED EXPERTS ON THIS SUBJECT AND VOTE NO ON THIS BILL.

Signed: David M. Bear
 Testifier 567-3344 (hm)
 283-583 (wk)

State Legislature Information Office

P.O. Box 34283
 NINILCHIK, AK 99639

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

WALTER J. HICKEL, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4100

March 11, 1994

The Honorable Pat Carney
Alaska State Legislature
State Capitol, Room 434
Juneau, AK 99801-1182

Dear Representative Carney:

In your capacity as chair of the House Resources subcommittee that is continuing to work on SB46 (Game Farming), we would like to clearly outline the administration's position on game farming and SB46.

The Departments of Environmental Conservation, Natural Resources, and Fish and Game, in consultation with Bill Ward representing the game farming industry, developed a unified position on game farming in Alaska. This position protects the domestic livestock and game farm industry, protects Alaska wildlife resources, and provides a climate for game farming to grow and prosper. We have also worked with Senator Miller's office in an attempt to amend SB46 to include these provisions.

The administration firmly believes that the House CS for CSSB46 requires further amendments. Changes that we propose would limit game farming to elk, bison, muskoxen and reindeer. An experimental animal husbandry permit would be authorized to allow individuals to raise moose. Regulations would be developed by DNR to allow the addition of moose and other native big game species to the list of species that could be game farmed. We believe it is essential to separate the administration of game farming and experimental animal husbandry permits. The state would retain ownership of animals held under an experimental animal husbandry permit and the sale of live animals or their meat would continue to be prohibited. The permittee would be able to use the meat for personal and family use and be able to sell antlers, hides, milk and other byproducts.

The Honorable Pat Carney

- 2 -

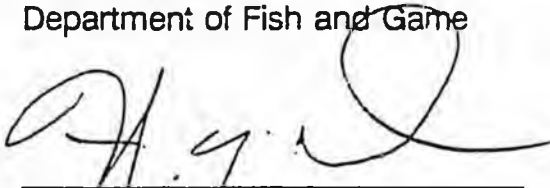
March 11, 1994

We have enclosed a list of amendments that would make these changes to House CS for CSSB46. The administration is supportive of the game farm industry and can support SB46 if these amendments are adopted and incorporated into the bill.

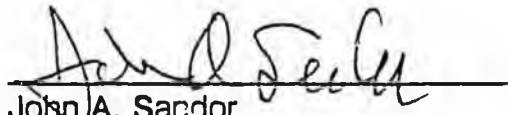
Sincerely,



Carl L. Rosier
Commissioner
Department of Fish and Game



Harry A. Noah
Commissioner
Department of Natural Resources



John A. Sandor
Commissioner
Department of Environmental Conservation

Enclosure

EXPLANATION OF PROPOSED CHANGES FOR
A M E N D M E N T

TO: HCS FOR CSSB 46()
(Utermohle WORK DRAFT 3/8/94)

Page 2, lines 15-16:

Delete "and animals subject to an experimental animal husbandry permit under AS 16.40.010"

Animals held under Title 16 permits should be regulated by the commissioner of fish and game--not by DNR; DNR should be responsible for game farming and domestic animals, ADF&G should retain responsibility for animal husbandry permits and game animals.

Page 4, lines 11-12:

Delete "caribou, moose, Sitka black-tailed deer"

Caribou, moose and Sitka black-tailed deer should not be defined as "game farm animals until they have been successfully bred under experimental animal husbandry permits.

Page 5, lines 30-31:

Delete "or to an experimental animal husbandry permit under AS 16.40.010"

Animals held under a Title 16, experimental animal husbandry permit should not be defined as "domestic" (and removed from department and fish and game oversight) until they are actually held under a game farming license.

Page 7, lines 28-29, following "The":

Delete "possession and utilization of animals acquired under this section for commercial purposes and"

Title 3 statutes and regulations adopted under Title 3 should apply only to game farm animals--not to animals held under Title 16 permits or used for commercial purposes other than game farming.

Page 8, line 10:

Delete "and sell the meat from"

Sale of meat from animals held under Title 16 experimental animal husbandry permits is inappropriate and could compromise wildlife enforcement regulations adopted by the Board of Game. At such time as ownership of animals held under these permits is transferred to the permittee under Title 3 game farming licenses, sale will become legal.

Page 8, lines 11-17, following "animals":

Delete ", and may charge a fee to the public for viewing of the animals. The preparation and sale of meat or other products under this subsection for human consumption are subject to AS 03 and regulations adopted under AS 03. Except as otherwise expressly provided in this subsection, the possession of animals for experimental animal husbandry purposes is subject to AS 03 and regulations adopted under AS 03 in the same manner as the possession of game farm animals"