

MINUTES OF THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES.

The meeting was called to order by Chairperson Don Sallee at 8:00 a.m. on February 3, 1993 in Room 423-S of the Capitol.

All members were present :

Committee staff present: Raney Gilliland, Legislative Research Department
Dennis Hodgins, Legislative Research Department
Don Hayward, Revisor of Statutes
Clarene Wilms, Committee Secretary

Conferees appearing before the committee:

Secretary Theodore D. Ensley, Secretary, Department of Wildlife & Parks
Darrel Montei, Legislative Liaison, Department of Wildlife & Parks
Al Ward, Commissioner, presenting testimony for James Holder, Chairman,
Commissioner, Department of Wildlife & Parks
William A. Anderson, Jr., Commissioner, Dept. of Wildlife & Parks
Bill Fuller, Asst. Director, Public Affairs Division, Kansas Farm Bureau
Spencer Tomb, President, Kansas Wildlife Federation, Inc.
Mike Beam, Exec. Sec., Cow-Calf/Stocker Division, KS Livestock Assn.
Kevin Robertson, Travel Industry Association of Kansas
Ron Smith, Chairman, Legislative Committee, Kansas Bow Hunters Association
Dan Brunetti, Chairman of County Clerks Committee on Wildlife & Parks,
Girard
Written Testimony with signatures of concerned citizens
Written Testimony, Greg Gilstrap, Director, Department of Commerce & Housing
Fiscal Note, SB-20-Gloria M. Timmer, Director of Budget
Written testimony in support of Theodore K. Ensley confirmation from KS Wildlife
Federation, Inc., Spencer Tomb, President

Others attending: See attached list

SB-20-concerning big game permits

Theodore D. Ensley, Secretary, Kansas Department of Wildlife & Parks appeared before the committee requesting passage of this proposed legislation which will address the needs of Kansas residents while providing a responsible level of nonresident deer hunting. Attachment 1

Darrel Montei, Department of Wildlife & Parks, presented supportive testimony on SB-20 noting his written testimony contained several minor amendments as well as addressing a plan to provide a manageable, yet limited, nonresident deer hunting program for Kansas. Attachment 2

Al Ward, Commissioner, presented supportive testimony from James Holderman, Chairman, Commissioner, Department of Wildlife & Parks to committee members. Attachment 3 In written testimony Mr. Holderman noted the subject of non-resident deer hunting was considered during the October, 1992 meeting of the Kansas Wildlife & Parks Commission. The Commission voted unanimously to endorse nonresident deer hunting and urged it be brought before the 1993 legislature.

William A. Anderson, Jr., Commissioner, Kansas Department of Wildlife & Parks appeared in support of SB-20. Mr. Anderson told the committee that this bill represents a reasonable compromise allowing limited non-resident deer hunting in Kansas. He noted this is a pro-hunting initiative, one that does not jeopardize the quality hunting opportunity now available to Kansas residents nor the Kansans who choose to hunt out of state. Attachment 4

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES, Room 423-S Statehouse, at 8:00 a.m. on February 3, 1993.

Bill Fuller, Asst. Director, Public Affairs Division, Kansas Farm Bureau presented testimony concerning SB-20. Testimony contains the organization's policy concerning "Hunting and Fishing Regulations - "We support the initiative of the department in authorizing up to 5% additional permits to nonresidents ... we encourage nonresident deer hunting participation and strongly support removal of the "doe only" restriction." It was noted that Kansas is the only state that does not offer non-resident deer hunting. Attachment 5

Spencer Tomb, President, Kansas Wildlife Federation, Inc., appeared in support of SB-20 noting concern that Kansas is the only state without nonresident deer hunting. He also expressed approval of the non-refundable drawing or processing fee. Attachment 6

Mike Beam, Exec. Sec., Cow/Calf/Stocker Division, Kansas Livestock Association, appeared in support of SB-20 and the issuance of nonresident deer permits. He commented that an increase in total permits issued should put more pressure on our large deer herd and not reduce the number of permits available to Kansas residents. Attachment 7

Kevin Robertson, Travel Industry Association of Kansas, appeared concerning SB-20 noting his organization strongly supported allowing nonresidents to purchase deer hunting permits. A suggestion was made that the committee lower the permit fee to an amount less than \$200. It was felt this would attract an increased number of nonresident big game hunters to Kansas and further add to our state's local economies. Attachment 8

Ron Smith, Chairman, Legislative Committee, Kansas Bowhunter's Association, Inc. presented testimony on SB-20. Mr. Smith expressed the concern of his organization that allowing nonresidents to hunt would increase leasing in our state. He noted Kansas needs to allow limited nonresident big game hunting, provided sufficient protection is given to the resident big game hunter. Several suggested changes were presented in written testimony. Attachment 9

Dan Brunetti, Chairman of County Clerks Committee on Wildlife & Parks, Girard, appeared in opposition to SB-20 noting his organization did not oppose nonresident firearms deer hunting in the state of Kansas. The objection lies in the fact that not all eligible hunters in the state that want to hunt deer are allowed to do so and this bill would allow out of state hunters to come into the state and hunt. Attachment 10

Written testimony from a number of citizens in the Wichita area was faxed to the committee. This group of residents opposed SB-20 especially when a by-product of the bill could result in leasing by organized guiding services. These services could reap the major benefits of deer hunting. Attachment 11

Written testimony was submitted by Greg W. Gilstrap, Director, Department of Commerce & Housing in support of SB-20. This testimony acknowledged Kansas was the only state that does not allow nonresident deer hunting and it was the opinion of that department that this creates an adverse image of our support for our outdoor recreational opportunities. Attachment 12

A fiscal note from Gloria A. Timmer, Division of the Budget was presented to committee members. Attachment 13

Written testimony by A. Spencer Tomb, President, Kansas Wildlife Federation, Inc., was presented in support of the confirmation of Theodore D. Ensley for Secretary, Department of Wildlife and Parks. Attachment 14

Senator Hardenburger moved, with a second by Senator Emert, to approve minutes of January 26, 27 and 23, 1993. The motion carried.

The meeting adjourned at 8:59 a.m.

The next meeting is scheduled for February 4, 1993.

SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES

(PLEASE PRINT)
NAME AND ADDRESS

Marty Burke
Keith Sexson
Joe Kramer
DAN BRUNETTI
KEVIN ROBERTSON
Bill Fuller
Al WARD
Darrell Monte
Bire Anderson
Ted Enaley
Mary Lou McPhail
Ron Smith
Carl McCollm
STEVE HOGAN
Spencer Tomb
Mike Beam
Steve Hagan
ED SCHAUB
Paul E. Fleener

STATE OF KANSAS



Joan Finney
Governor

DEPARTMENT OF WILDLIFE & PARKS

OFFICE OF THE SECRETARY

900 SW Jackson St., Suite 502 / Topeka, Kansas 66612 - 1233
(913) 296-2281 / FAX (913) 296-6953

Theodore D. Ensley
Secretary

MEMORANDUM

To: Honorable Don Sallee, Chairman
Senate Energy and Natural Resources Committee
Committee Members
Senate Energy and Natural Resources Committee
From: Theodore D. Ensley, Secretary
Kansas Department Of Wildlife and Parks
Date: February 3, 1993
Re: Senate Bill 20, Non-resident Deer Hunting

Mr. Chairman and Members of the Committee, the Department of Wildlife and Parks proposes to establish non-resident deer hunting. We ask you to support passage of Senate Bill 20. I believe this proposed legislation will address the needs of Kansas residents while providing a responsible level of non-resident deer hunting.

Kansas deer hunting has grown dramatically since the first modern deer season was conducted in 1965 when slightly fewer than 4,000 permits were issued. By 1992, the number of permits had grown to more than 60,000. It is my belief that this increase reflects a thriving deer herd and important outdoor recreation and economic resource for the state.

In keeping with my desire to provide as much public information as possible, we have conducted a series of meetings across the state to bring this issue forward. With the input received, a proposal has been crafted to balance the concerns of resident hunters with the need to provide fair hunting opportunities.

Once again, we urge you to support passage of Senate Bill 20.

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 1

STATE OF KANSAS



Joan Finney
Governor

DEPARTMENT OF WILDLIFE & PARKS

Theodore D. Ensley
Secretary

OFFICE OF THE SECRETARY

900 SW Jackson St., Suite 502 / Topeka, Kansas 66612 - 1233
(913) 296-2281 / FAX (913) 296-6953

S.B. 20

Testimony Presented To: Senate Energy & Natural Resources Comm.

Presented By: Kansas Department of Wildlife and Parks

February 3, 1993

S.B. 20 addresses nonresident deer hunting and would amend K.S.A. 32-937 and K.S.A. 32-988 to provide a manageable, yet limited, nonresident deer hunting program for Kansas. Current statute authorizes the issuance of nonresident deer hunting permits, but precludes implementation of a nonresident program due to restrictive provisions within K.S.A. 32-937.

Under those restrictions, nonresidents are granted access to "doe only" permits, but that authorization is rescinded on and after July 1, 1993. Nonresidents are limited to not more than 2% of the number of authorized resident firearms permits and not more than 1% of the number of archery permits issued during the prior archery season.

The Department does not issue "doe only" permits because of the identification difficulties in the field thus creating possible violation situations. Setting up a procedure to administer a nonresident deer hunting program requires effort and expense. The Department has been reluctant to commit to such a process due to the July 1, 1993 sunset clause in current statute. S.B. 20 would amend K.S.A. 32-937 by deleting the two restrictive provisions.

The Department recommends the present 2% and 1% limitations

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 2

on nonresident firearms and archery permits be amended to a maximum of 5%. The current percentage limitations result in a very low number of nonresident deer permits available. It is the Department's position that a larger number of permits can be accommodated without impacting the resource or the Kansas deer hunter in those units where nonresident deer hunting permits would be authorized.

In addition, the proposed legislation would create a \$5 nonrefundable application fee for nonresidents. This would cover costs of administering the nonresident program. Many other states charge a big game application fee and it is nonrefundable.

Two minor amendments of a housekeeping nature are also recommended in S.B. 20. On page 1, lines 34 and 35, a definition of "nonresident permit" is proposed. The provisions of K.S.A. 32-937 do not apply to big game animals legally taken from another state. This exception is too narrow as it does not take into account that big game can also be taken from other countries such as Canada. On page 4, line 13, it is recommended that the words "from another" be struck and the words "outside this" be added.

The issue of nonresident deer hunting is a subject of much discussion and has been so for some time. There has always been a vocal constituency opposing nonresident hunting, particularly deer hunting. There is also a growing number of people who support nonresident deer hunting as long as it is accomplished within reasonable limitations. The amendments proposed in S.B. 20 maintains adequate limitations.

Kansas is now the only state to not have a nonresident deer hunting program. Iowa was the most recent state to allow nonresident deer hunting and they have a reciprocal clause that prohibits a hunter from another state from hunting in Iowa if an Iowa hunter is prohibited from hunting in that state. Several other states have considered similar reciprocal legislation including Nebraska, Colorado and Wyoming. Several states such as Missouri have appealed to the Department to consider allowing their residents some level of access to Kansas permits.

The state of Kansas is currently under no federal mandate to allow nonresidents or to be reciprocal with other states. There is a concern that if challenged, a court case could result in a nonresident deer program being established for the state. This would be based primarily on the fact that Kansas does have some

federal land and that the Department manages deer under the federal aid (P.R.) program.

The Department and the Commission recognizes that some deer management units do not have enough resident deer permits available to largely satisfy the resident demand. Out of the 18 deer management units, it is anticipated that less than 1/2 of the units may have nonresident deer permits authorized. For those units with nonresident permits, it is important to note that those permits would be issued in addition to the number of resident permits set. And it could be any percent between 0 and 5%.

S.B. 20, if enacted, is recommended to become effective upon publication in the Kansas Register. That should allow enough time to implement a nonresident deer permit program for 1993.

BILL NOTE NO

Senate Bill No. 20

ANALYSIS

Senate Bill No. 20 would amend existing State legislation pertaining to big game permits. The bill would amend K.S.A. 1992 Supp. 32-937 and 32-988 to allow limited nonresident deer hunting within the State. The bill would authorize the Department of Wildlife and Parks to issue deer hunting permits to nonresidents not to exceed a maximum of two percent of the firearm permits and five percent of the archery deer hunting permits issued to residents. The bill provides that a nonresident issued a deer hunting permit for a particular year shall be ineligible to apply for or receive a deer hunting permit for the following year.

The bill includes a definition of nonresident permit, eliminates the sunset provision of July 1, 1993, and eliminates the restriction in current law that nonresident deer permits shall be for does only. In addition, the bill authorizes a \$5.00 nonresident application fee. The bill becomes effective upon publication in the Kansas Register.

OPERATIONS STATEMENT

The provisions of the bill will require the Department of Wildlife and Parks to establish procedures to distribute applications to nonresidents, receive applications, select and notify successful applicants, and distribute permits. These efforts will require computer programming and entry time. Estimated cost for these items is included under the fiscal impact statement.

It should be noted that the bill in its current form does not provide for the number of nonresident deer hunters that was intended by the Department of Wildlife and Parks when it requested the legislation. The bill in its introduced form provides for a maximum of two percent for nonresident firearm permits. The request of the Department was for a maximum of five percent for nonresident firearm deer permits.

FISCAL IMPACT

The Department of Wildlife and Parks estimates a provision allowing a maximum of two percent for the number of firearm nonresident deer permits will allow the Department to issue a maximum of 980 permits. A maximum of five percent for the number of archery nonresident deer permits will allow the Department to issue a maximum of 750 permits. The Wildlife and Parks Commission has adopted a regulation authorizing a fee of \$200 for a nonresident deer hunting permit. Assuming a maximum of 1,730 nonresident deer hunting permits issued the Department would receive an amount of \$346,000 in revenue which would be deposited

to the Wildlife Fee Fund. If the percentage requested by the Department (five percent maximum for firearm and archery nonresident deer permits) is utilized, the Department would issue a maximum of 2,800 nonresident permits and generate revenue of \$560,000.

It should be noted that the Department of Wildlife and Parks does not anticipate issuing the number of permits that would be allowable under the provisions of SB 20. In some of the deer management units, the number of resident hunters that are unsuccessful in obtaining a preferred permit is fairly high due to the limited number of permits authorized. In these units, it is likely that few if any nonresident deer permits would be issued. Therefore, the total number of nonresident deer permits issued by the Department would be less than the maximum allowable by SB 20. It is estimated that the actual income from nonresident deer permit sales in the first year such permits are authorized would be approximately \$250,000. This estimate is based on the historical number of permits issued to resident hunters.

In addition to the fee for a nonresident deer hunting permit, the bill authorizes a \$5.00 nonresident application fee. The Department estimates that 5,000 applications for a nonresident deer permit will be received in the first year such a permit is available. The estimated revenue of \$25,000 would be deposited to the Wildlife Fee Fund.

The Department of Wildlife and Parks estimates that expenditures of \$15,000 will be required to implement the provisions of Senate Bill No. 20. These expenditures will be financed from the Wildlife Fee Fund and will be for postage, printing, computer usage, and seasonal and temporary salaries required to process forms. The bill has an effective date of publication in the Kansas Register. This will allow the Department to prepare forms and notification to nonresidents of the authorization for nonresidents to hunt deer in Kansas. However, expenditures and revenues are estimated to occur in FY 1994. Any revenue or expenditures associated with passage of Senate Bill No. 20 would be in addition to amounts included in the FY 1994 Governor's Report on the Budget.

ADDITIONAL STAFFING

No additional staffing will be required to implement the provisions of Senate Bill No. 20.

FIREARMS DEER PERMIT INFORMATION BY MANAGEMENT UNIT, 1990-1992.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
<u>UNIT 1</u>								
PERMITS AVAILABLE	1990	1,400			150	220		100
	1991	360		180	600	230		100
	1992	360		180	600	230		130
NUMBER OF APPLICATIONS	1990	1,702			5	10		84
	1991	1,687		29	36	9		108
	1992	1,546		47	51	12		98
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	93						6
	1991	400						
	1992	278						
PERMITS LEFTOVER AFTER 1ST DRAWING	1990					166		4
	1991					33		
	1992					67		

<u>UNIT 2</u>								
PERMITS AVAILABLE	1990	580			100	170		100
	1991	300		100	100	120		120
	1992	300		100	100	120		130
NUMBER OF APPLICATIONS	1990	931			7	7		93
	1991	1,120		10	11	11		104
	1992	1,037		18	16	16		111
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	113						2
	1991	502						
	1992	408						
PERMITS LEFTOVER AFTER 1ST DRAWING	1990					21		
	1991							
	1992							

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
<u>UNIT 3</u>								
PERMITS AVAILABLE	1990	660	180		270	440		115
	1991	220	250		280	350		115
	1992	220	250		280	350		130
NUMBER OF APPLICATIONS	1990	1,422	79		34	12		97
	1991	1,420	148		70	26		109
	1992	1,275	190		93	10		110
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	92						
	1991	538						1
	1992	466	1					
PERMITS LEFTOVER AFTER 1ST DRAWING	1990					157		
	1991							
	1992							

UNIT 4

PERMITS AVAILABLE	1990		310		510	360		70
	1991		300		570	100		70
	1992		300		570	100		70
NUMBER OF APPLICATIONS	1990		263		625	8		46
	1991		314		697	12		58
	1992		300		743	3		62
NUMBER OF UNSUCCESSFUL APPLICANTS	1990				17			
	1991		6		39			1
	1992				63			1
PERMITS LEFTOVER AFTER 1ST DRAWING	1990					296		22
	1991							8
	1992							

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
<u>UNIT 5</u>								
PERMITS AVAILABLE	1990		120		450	200		100
	1991		120		240	140		100
	1992		120		240	140		120
NUMBER OF APPLICATIONS	1990		207		643	25		89
	1991		264		705	37		111
	1992		261		757	31		129
NUMBER OF UNSUCCESSFUL APPLICANTS	1990		19		62			10
	1991		113		330			8
	1992		118		346			
PERMITS LEFTOVER AFTER 1ST DRAWING	1990							
	1991							
	1992							

UNIT 6

PERMITS AVAILABLE	1990		1,160	1,240				115
	1991		1,750	350				115
	1992		2,100					120
NUMBER OF APPLICATIONS	1990	1,147		13				77
	1991	1,243		10				90
	1992	1,260						88
NUMBER OF UNSUCCESSFUL APPLICANTS	1990		2					1
	1991		3					1
	1992							
PERMITS LEFTOVER AFTER 1ST DRAWING	1990			1,227				39
	1991	395		337				24
	1992	712						33

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
<u>UNIT 7</u>								
PERMITS AVAILABLE	1990		590		1,560			105
	1991		500		1,000		300	105
	1992		500		1,000		300	120
NUMBER OF APPLICATIONS	1990		493		1,485			109
	1991		612		1,669		38	98
	1992		543		1,579			105
NUMBER OF UNSUCCESSFUL APPLICANTS	1990				1			
	1991		105		375			
	1992		38		299			1
PERMITS LEFTOVER AFTER 1ST DRAWING	1990		92		46			
	1991							
	1992							

UNIT 8

PERMITS AVAILABLE	1990	2,320						120
	1991	1,300	500					120
	1992	1,300	500					120
NUMBER OF APPLICATIONS	1990	2,282						53
	1991	2,440	171					70
	1992	2,238	197					88
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	2						1
	1991	649	1					
	1992	508						
PERMITS LEFTOVER AFTER 1ST DRAWING	1990	21						67
	1991							
	1992							

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
UNIT 9								
PERMITS AVAILABLE	1990	2,090	270					125
	1991	900	950					125
	1992	900	950					125
NUMBER OF APPLICATIONS	1990	2,227	147					82
	1991	2,347	262					100
	1992	2,211	315					114
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	12						
	1991	502	3					
	1992	468						
PERMITS LEFTOVER AFTER 1ST DRAWING	1990		21					35
	1991							
	1992							

UNIT 10

PERMITS AVAILABLE	1990	5,270		2,320				140
	1991	7,600						140
	1992	7,600						240
NUMBER OF APPLICATIONS	1990	446		25				241
	1991	5,121						256
	1992	5,219						277
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	11						18
	1991	30						23
	1992	15						17
PERMITS LEFTOVER AFTER 1ST DRAWING	1990	701		2,292				
	1991	2,165						
	1992	2,064						

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
<u>UNIT 11</u>								
PERMITS AVAILABLE	1990	4,750		3,950				350
	1991	4,700		3,950				350
	1992	4,700		3,950				250
NUMBER OF APPLICATIONS	1990	5,261		38				189
	1991	6,402		125				227
	1992	6,551		178				294
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	71						10
	1991	270		4				12
	1992	485		1				17
PERMITS LEFTOVER AFTER 1ST DRAWING	1990			3,531				104
	1991			2,488				139
	1992			2,481				

UNIT 12

PERMITS AVAILABLE	1990	4,370						300
	1991	4,370						300
	1992	4,370						200
NUMBER OF APPLICATIONS	1990	2,975						87
	1991	3,264						158
	1992	3,332						171
NUMBER OF UNSUCCESSFUL APPLICANTS	1990							
	1991							
	1992	8						1
PERMITS LEFTOVER AFTER 1ST DRAWING	1990	1,353						215
	1991	1,027						169
	1992	950						29

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
UNIT 13								
PERMITS AVAILABLE	1990	1,160						150
	1991	1,160						150
	1992	1,160						50
NUMBER OF APPLICATIONS	1990	589						29
	1991	665						28
	1992	660						38
NUMBER OF UNSUCCESSFUL APPLICANTS	1990							3
	1991	5						
	1992	1						
PERMITS LEFTOVER AFTER 1ST DRAWING	1990	555						124
	1991	481						116
	1992	491						12

UNIT 14

PERMITS AVAILABLE	1990	3,880		3,210				150
	1991	4,700		2,300				150
	1992	4,700		2,300				200
NUMBER OF APPLICATIONS	1990	3,996		43				161
	1991	4,589		73				181
	1992	4,735		74				222
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	20		1				4
	1991	33		6				10
	1992	14						7
PERMITS LEFTOVER AFTER 1ST DRAWING	1990			3,077				
	1991			2,182				
	1992			2,134				

FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
UNIT 15								
PERMITS AVAILABLE	1990	2,130		1,410				140
	1991	2,500		400				140
	1992	2,500		400				200
NUMBER OF APPLICATIONS	1990	2,583		22				130
	1991	2,918		39				180
	1992	2,842		35				146
NUMBER OF UNSUCCESSFUL APPLICANTS	1990	60						
	1991	86		1				24
	1992	83						
PERMITS LEFTOVER AFTER 1ST DRAWING	1990			1,038				
	1991			18				
	1992			87				43
UNIT 16								
PERMITS AVAILABLE	1990		100		430	150		60
	1991		100		300	70		60
	1992		100		300	70		80
NUMBER OF APPLICATIONS	1990		137		448	18		32
	1991		157		492	22		50
	1992		140		488	17		55
NUMBER OF UNSUCCESSFUL APPLICANTS	1990		6		3			
	1991		43		126			
	1992		18		115			
PERMITS LEFTOVER AFTER 1ST DRAWING	1990					77		28
	1991							
	1992							7

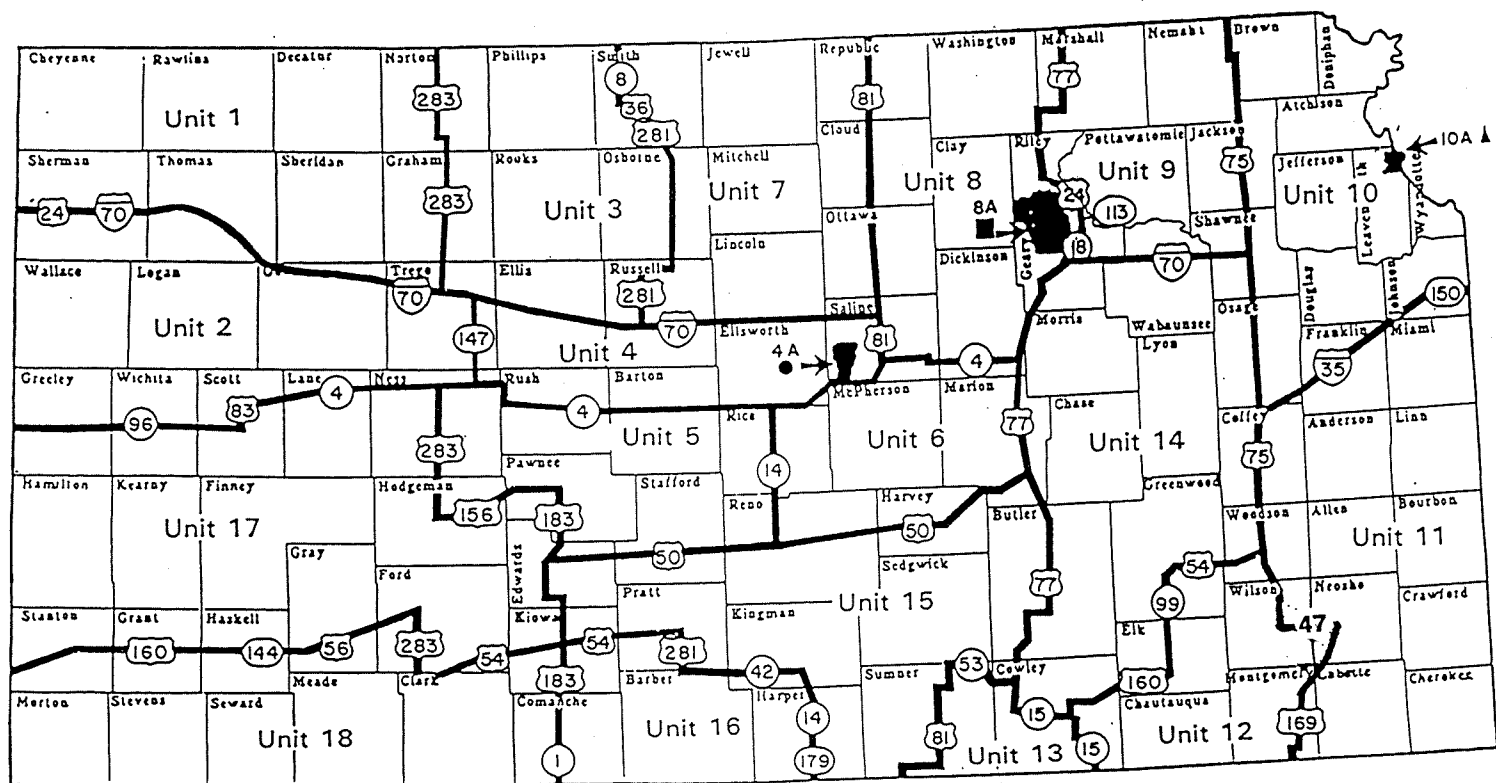
FIREARMS DEER PERMITS, CONT.

	YEAR	ANY DEER	ANY BUCK	ANTLERLESS ONLY	ANY WHITETAIL	WHITETAIL BUCK	WHITETAIL ANTLERLESS	MUZZLELOADER ONLY
<u>UNIT 17</u>								
PERMITS AVAILABLE	1990		120		500	180		175
	1991				400	100		175
	1992		400		400	100		200
NUMBER OF APPLICATIONS	1990		659		420	13		152
	1991				787	139		222
	1992		735		458	16		208
NUMBER OF UNSUCCESSFUL APPLICANTS	1990		212		19			45
	1991				363	37		17
	1992		195		83			
PERMITS LEFTOVER AFTER 1ST DRAWING	1990							
	1991							
	1992							

UNIT 18

PERMITS AVAILABLE	1990		110		200	190		90
	1991				170	170		90
	1992		200		170	170		120
NUMBER OF APPLICATIONS	1990		309		246	24		97
	1991				403	182		134
	1992		361		278	32		125
NUMBER OF UNSUCCESSFUL APPLICANTS	1990		50		19			6
	1991				225	12		40
	1992		73		49			5
PERMITS LEFTOVER AFTER 1ST DRAWING	1990							
	1991							
	1992							

DEER MANAGEMENT UNITS -- 1993



● SMOKY HILL A.N.G. RANGE, UNIT 4A

■ FT. RILEY, UNIT 8A

▲ FT. LEAVENWORTH, UNIT 10A

DEER MANAGEMENT IN KANSAS

PAST

PRESENT

FUTURE



Keith Sexson
Big Game Program Coordinator

Robert L. Meinen
Secretary

W. Alan Wentz
Assistant Secretary

Kansas Department of Wildlife & Parks
September, 1989

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DEER MANAGEMENT IN KANSAS

PAST, PRESENT and FUTURE

INTRODUCTION

Of the large mammals native to North America, the deer is considered the most abundant, most adaptable, most widely distributed and a most important group when considering recreational opportunity and economics. Deer would rank at or near the top of any list of popular and desirable North American wildlife. For that reason, management of our deer resource is inevitable. O.C. Wallmo (Wallmo, O.C. 1981. Mule and Black-tailed Deer of North America. Univ. of Nebraska Press, Lincoln, NE. 605 pp.) described the complexity of deer management when he stated that "social pressures are exerted, political forces enlisted, legislative decisions made, and administrative mandates issued on the behalf of deer. Public demands may be altruistic, selfish, ill-conceived, conflicting, or even impossible to fulfill, but still they can be assigned as management goals. Of course, this accommodation of public demand poses a frustrating responsibility for administrators and a staggering challenge to resource managers. They must seek both philosophical and technical solutions."

Management of Kansas deer is the responsibility of the Department of Wildlife and Parks operating under laws established by the Kansas Legislature and regulations passed by the Wildlife and Parks Commission. The Commission and the Department work together to balance the many interests of the public in deer management.

The Kansas deer management program is designed to recognize and address public desires yet maintaining primary concern for the well-being of the deer resource. "Deer Management in Kansas: Past, Present and Future" is an outline of the Kansas deer management program and is presented in an effort to help the Kansas public better understand deer resource management in our state. The successful implementation of this program requires the cooperative effort of all those interested in Kansas deer.

THE PAST

Deer evolved during the Miocene period, some 15 to 20 million years ago. The Miocene was the age of mammals, and North America teemed with game. During the following Pleistocene period, however, great droughts and glaciation decimated entire sub-orders of mammals. Deer survived, adapted and prospered in spite of drastic environmental changes and predation. Today there are some

30 sub-species of the white-tailed deer and 10 sub-species of mule deer occupying North America from coast to coast, Panama to Alaska.

Two subspecies of white-tailed deer thrive in Kansas. The Texas variety (Odocoileus virginianus texanus) inhabits the western two-thirds of the state. The Kansas variety of white-tailed deer (O. v. macrourus) inhabits the eastern one-third. The Rocky Mountain mule deer (Odocoileus hemionus) inhabits the western one-third of Kansas.

Large numbers of buffalo, pronghorn, and even elk inhabited the pre-settlement prairies of Kansas; but deer were not common west of the state's eastern woodlands. Fires maintained the prairie ecosystem and reduced or eradicated woody growth. Frequent flooding and scouring action of water restricted woody plant invasion along streamsides. While deer did play a significant role in the settlement of this state, particularly in the eastern one-third, they were of secondary importance. Bison provided most of the meat, hides, and bones used by Indians, explorers, trappers, and settlers.

White-tailed deer were found nearly anywhere there was woody cover. The Lewis and Clark Expedition reported a large concentration of deer on the banks of the Missouri River near the present site of Kansas City in 1804. Zebulon Pike found deer in eastcentral Kansas in 1806. Herds of mule deer were reported along the upper reaches of the Smoky, Saline, and Solomon rivers as late as 1866.

Judging from these and other reports, deer were more or less common along the wooded portions of streams and in large timbered areas until about 1884. By 1890, deer had disappeared from most of western and northern Missouri and maintained a precarious existence in the southern Ozark areas. Deer numbers in the United States hit a low between the years 1875 and 1915. Deer were declared extirpated in Kansas in 1904.

Deer were not abundant on the Plains following the drought of the 1930's and were still considered absent from Kansas in 1933. The prolonged drought, however, allowed woody plants to become established along streams. Shelterbelts were planted and flood control structures built. As woody vegetation thrived, so did deer. During this period, deer were increasing in Missouri, Nebraska, and Colorado. Some states undertook trapping and transplanting efforts to assist with the restoration of deer. However, no information has been found to suggest that Kansas was involved in trapping and transplanting efforts. By the early 1950s deer were being seen frequently in Kansas. Since then the Kansas deer population has continued to increase. Deer numbers in the United States have increased from an estimated low of 500,000 in 1908 to an estimate of nearly 20 million today.

Available records show that deer hunting season dates in Kansas were established in 1861-1876. The number of open days ranged from 138 in 1876 to 211 for the period 1861-1875. Records show no protection was provided for the period 1877-1907 and 1921-1924. There were no open seasons during the period 1908-1924 and 1925-1964. By 1965 the population had reached levels that were sufficient to allow regulated hunting. Tables 1 and 2 present a summary of Kansas archery and firearms hunting information, respectively.

THE PRESENT

Deer management, in its broadest sense, includes five essential components:

- (1) research programs to provide knowledge and understanding of deer biology, behavior, and ecology;
- (2) surveys to monitor population, habitat, and user group characteristics and trends;
- (3) information and education to enhance public understanding and support of deer management programs;
- (4) enforcement of laws and regulations designed to manage deer populations; and
- (5) management of deer habitat and harvest.

Deer management activities in Kansas have focused primarily on habitat and harvest management. Adequate food, water, and cover in a suitable arrangement are essential to the survival of deer. Deer habitat in Kansas is a complex of woody, herbaceous and agricultural vegetation that changes with the season, land use, climate and human disturbance. The preservation and enhancement of existing deer habitat, and the development of additional habitat is critical to maintaining a viable deer population in Kansas.

When establishing deer harvest objectives the following factors are considered:

- (1) population status;
- (2) deer species;
- (3) trophy buck management;
- (4) hunter management; and
- (5) landowner tolerance levels for deer and deer hunters.

Since Kansas is an agricultural state with over 95% of its land in private ownership, the landowner tolerance aspect of deer management is primary in the establishment of deer harvest strategies.

POPULATION STATUS:

Population trend surveys conducted by the Department of Wildlife and Parks have indicated an increase in the deer population over the last 25 years. The Department does not "count" the number of deer in the state. However, trend surveys are used to determine whether the population is increasing, decreasing or remaining stable. Surveys used to monitor change in the deer population, deer harvest, hunter performance and landowner attitudes include:

- (1) deer-vehicle accident reports;
- (2) periodic (5-year interval) landowner deer survey;
- (3) January deer count;
- (4) archery and firearm hunter report cards;
- (5) deer incisor tooth collection (age data); and
- (6) feedback from Department personnel and the general public.

The number of deer-vehicle accidents reported per billion vehicle miles has increased from 107 in 1965 to 519 in 1986, with a downward trend to 493 in 1988. This information suggests a stabilized or decreasing statewide population trend since 1986 (Fig. 1).

The landowner deer survey involves contacting a stratified, random sample of 3,500 Kansas landowner/operators. The survey is conducted at 5-year intervals and was first used in 1964. The seventh survey will be conducted in January, 1990. The survey provides a population measure based on landowner perception. However, the landowner's perception of deer numbers and hunter activity is the basis on which the landowner establishes his tolerance level.

Information obtained from the landowner survey relating to population levels, indicated that 48% of the 1985 respondents perceived an increasing deer population and 11% perceived a decreasing population. In 1972, 24% of the respondents indicated the population was increasing and 26% perceived it to be decreasing (Fig. 2).

Hunter performance is a potential indicator of change in population trends. As the population increases, an increase in hunter success may be expected, and decreasing hunter success will likely follow a decline in population levels. Hunter success values as a population trend indicator must be evaluated with changes that may be occurring in the amount of time a hunter spends in the field, (i.e., even with a decreasing population, if the hunter increases the amount of time spent hunting, success may remain high). Archery and firearms hunter success trends are presented in Figure 3.

Increasing deer numbers and harvest goals have resulted in increased numbers of hunters (Fig. 4) and hunter success (Fig. 3). Number of archery permits have increased from 1,100 in 1965 to 15,000 in 1988 (Table 1). Firearm permits have increased from 4,600 in 1965 to 60,000 in 1988 (Table 2). Hunters have also experienced higher success rates over the last 25 years of deer hunting. Archers had 14% success in 1965 compared to 38% in 1988, while firearm success was 38% in 1965 and nearly 70% in 1988.

The increase in the deer population can be attributed primarily to the productive capabilities, adaptation to new environments, and the high survival rates of white-tailed deer in the midwest agricultural states. These increasing deer population trends are occurring in all midwest states.

Because of the diverse nature of Kansas' deer habitat and variation in the density of deer, 18 harvest management units were established to better formulate harvest goals and hunter distribution (Fig. 5). Harvest goals are set for each of these units and firearm permit quotas are recommended that will achieve desired harvest objectives.

DEER SPECIES:

Kansas is fortunate to have 2 species of deer within its boundaries, the mule deer and the white-tailed deer. The white-tail is the most common deer in Kansas and has been the greatest contributor to the growth of the deer population in the state. Having these 2 species results in special management considerations in those areas where mule deer and white-tail are found. Differences in the behavior and habitat preference by the 2 species dictate differential harvest management strategies.

The mule deer presents a harvest management challenge because its behavior makes it more vulnerable to hunting pressure. The mule deer inhabits open grasslands and croplands in western Kansas and is a more curious animal. The white-tailed deer prefers more secluded habitat and exhibits a more wary behavior.

Until 1979 there was no differentiation in harvest goals for the 2 species. Since the reopening of deer hunting in 1965, the mule deer was the primary species in western management units and there was no reason to consider harvest goals for individual species. White-tailed deer comprised less than 5% of the total deer harvest in western units in the mid-1960s. By the mid-1970s, white-tails comprised about 25% of the western harvest. The white-tail was expanding its range into traditional mule deer areas and contributing to an increase in deer numbers. Permit quotas and harvest goals were increased, but without considering mule deer vulnerability. The result was that hunting pressure increased on the mule deer rather than being apportioned to both species. This

continued harvest pressure on the mule deer appeared to be contributing to a decline in mule deer numbers.

In 1979, "white-tail only" permits along with "either species" permits were issued. In an attempt to increase the mule deer population in 9 western management units (units 1, 2, 3, 4, 5, 7, 16, 17 and 18) (Fig. 5), mule deer does were protected by issuing "bucks only, either species" permits; and, in an attempt to stabilize the white-tail population a combination of "any white-tail" and "white-tail antlerless only" permits were issued. This system has resulted in white-tails comprising 60-80% of the deer harvest in traditional mule deer management units. Preliminary indications are that the mule deer population is increasing and white-tail numbers are stabilizing in western units.

TROPHY BUCK MANAGEMENT:

When most deer hunters go afield, they have visions of harvesting a "trophy" deer. What constitutes a trophy buck varies amongst hunters. The Kansas deer management program provides the opportunity for a hunter to harvest a trophy buck if he directs his hunt at achieving that goal. However, the deer population is not managed in a way that will place a record trophy buck in the sights of every hunter.

Management of trophy bucks in Kansas means allowing animals to reach 2 1/2 years of age or older. Age data are necessary for monitoring the influence of harvest on the population age structure. To do this, firearms deer hunters collect the two primary incisors from deer they harvest and send them to the Department. By visual inspection the fawns and 1 1/2 year old deer are sorted from the adults. A sample of the adult incisors are sectioned and microscopically "read" for age. The age is determined by counting the number of growth rings or dental cementum annuli, much like counting the annual growth rings for the age of a tree.

The mule deer buck harvest age structure for the last 5 years has averaged 55% yearlings, 30% 2 1/2 year-old deer, and 15% 3 1/2 years or older. The white-tail buck harvest for the same time period averaged 60% yearlings, 20% 2 1/2 years old, and 20% 3 1/2 years and older. Figure 6 provides a graphic view of the 5-year average firearms deer harvest age distribution. This type of age structure provides a good balance between young deer and trophy-age bucks.

The production of trophy deer involves genetics, nutrition and age. Management control of genetics and nutrition are difficult, but we can exercise control over the age distribution by controlling the number of bucks harvested. Since the early

1980s, the percent of yearling bucks in the firearms harvest has been maintained at 60% or less (Fig. 7).

HUNTER (USER) MANAGEMENT:

The Department objective is to provide hunting opportunity for as many hunters as possible, yet maintaining concern for the deer resource and the quality of the hunting experience.

An increasing number of hunting permits (Fig. 4) has been the result of an increasing deer population and the need for population control. Increases in the number of firearms permits averaged 10% per year in the period 1965-1974, 12% per year in 1975-1984 and 20% per year for the period 1985-1988. This represents more than a 3 fold increase in firearms permits in the last 10 years. Nearly 55,000 permits were available for the 1989 firearms season and an unlimited number of "antlerless only" permits were available in management units 12 and 13 (Fig. 5).

A permit quota is not established for archery permits and the number of archery permits issued has remained at 15,000 to 16,000 since 1983, compared to nearly 4,500 in the early 1970s.

The Department, by regulation, provided a hunt-on-your-own-land permit. This system assures the landowner a deer permit for hunting on his own property. The landowner was eligible for one of these permits if he was unsuccessful in obtaining a permit through the regular drawing process. This permit has been available since 1987 and an average of 1,200 have been issued annually.

The Kansas deer population at present is supporting 255,000 mandays of archery hunting and 200,000 mandays of firearms hunting, and an unknown number of days of recreation for those who enjoy viewing Kansas deer (Fig. 8).

As the number of available permits increase, a greater proportion of Kansas hunters who want to hunt deer are satisfied. However, with increased numbers of hunters there is also the potential for a reduction in the quality of hunting experiences. The density of archery hunters has increased from 3 hunters per 100 square miles in 1966 to 16 in 1988; firearms hunters have increased from 8 per 100 square miles in 1966 to 60 in 1988.

The definition of a "quality" hunting experience varies with each hunter. Laws and regulations are not only a tool for managing hunter harvest, but they also establish a baseline for hunter ethics and quality hunting. As hunter numbers and hunting conditions change, laws, regulations, and policies will also change to maintain some degree of quality and ethical behavior in the

sport of deer hunting. Hunter safety is a major concern with increased hunter numbers.

Special interest groups provide another dimension to user management. The deer management program attempts to be responsive to the interests of all users (consumptive and non-consumptive) of the deer resource and where possible those interests are incorporated into the management program. Maintaining open lines of communication with user groups is the foundation for working together for the benefit of the deer resource.

LANDOWNER TOLERANCE:

Landowner concerns focus on the increasing deer population and the potential for crop damage, and the increasing number of deer hunters. Because Kansas is an agricultural state, landowner tolerance levels are of primary concern in the establishment of deer management strategies.

The landowner deer survey provides a means for monitoring changes in landowner attitudes and tolerance levels for deer and deer hunting activity. The information collected allows the Department to understand and respond to the concerns of Kansas landowners.

When landowners were asked in 1985 "How many deer they wanted on their land," 77% wanted the same or more deer, this compares to 83% in 1980. Nearly one-half (48%) of the landowners in 1985 desired a stabilized deer population.

When asked about deer damage in 1985, there was a slight increase in the proportion of landowners reporting deer damage when compared to 1980 (23% in 1980 and 28% in 1985). The trend in percent of landowners reporting damage by deer follows closely the trend in deer population growth (Fig. 9). Of the landowners reporting damage in 1985, 8% wanted more deer while 43% wanted the same number; this compares to 12% and 50%, respectively, in 1980.

There has been a recognized need for population control since the late 1970s. Efforts to control deer numbers in Kansas has involved an increased total deer harvest (Fig. 10) and a greater proportion of that harvest has been antlerless deer (does and fawns) (Fig. 11). The types of permits issued ("bucks only", "any deer", and "antlerless only") are determined by the population goal. If population stabilization or decrease is desired, it is necessary to harvest does. This requires the issuance of "any deer" and "antlerless only" permits. If a population increase is the goal, then the does need protection and "bucks only" permits may comprise the bulk of the permits issued. Trends of change in white-tail and mule deer firearms harvest and percent antlerless deer in the harvest are presented in Figures 12 and 13,

respectively. Figure 14 illustrates the trend in total white-tail harvest in comparison to the harvest of mule deer.

Maintenance of the population at a given level requires that surplus animals be harvested, including females. If an increase is desired, then some surplus should be left for breeding stock. If herd reduction is the goal, then all the surplus and some of the breeding stock will need to be harvested.

Hunter harvest is the most effective and feasible method for population control. An effective hunter harvest requires that sufficient numbers of hunting permits be issued to achieve the desired harvest. In an effort to increase the harvest of antlerless deer, 90-98% of the permits available in 1985-1988 were for "any deer" or "antlerless only" deer; this compares to 15-20% in the period 1975-1980. All archery permits are for "any deer".

In 1977, the proportion of does in the white-tail firearms harvest was 6%, the lowest in 24 years of hunting. An average of 42% of the 1984-1988 white-tail harvest were does, showing an attempt to stabilize the white-tail population. In an effort to increase mule deer numbers by protecting does, the proportion of does in the 1981-1983 mule deer firearms harvest was 8%. As the result of efforts to protect does, the mule deer population is increasing in Kansas and more does are now being harvested in order to maintain numbers within landowner tolerance limits. Does comprised an average of 30% of the 1986-1988 mule deer firearms harvest.

Decline in reported deer-vehicle accidents in some areas of Kansas is an indication that the use of hunter harvest is yielding success in reducing deer populations. However, deer numbers in southeast Kansas are still showing an increasing trend and efforts are being made to control deer numbers with increased hunter harvest. Figures 15 and 16 present reported deer-vehicle accident trends by Kansas Department of Transportation Districts (Fig. 17). Decreasing deer-vehicle accident trends are indicated in districts 1, 2, 3 and 6 (Fig. 15), and increasing trends are indicated in districts 4 and 5 (Fig. 16).

Current deer management efforts are directed at maintaining the Kansas deer population within tolerance limits accepted by most landowners yet providing maximum recreational opportunity for Kansas citizens. As long as Kansas supports a deer population there will be deer damage problems in localized areas. Damages can be minimized by continued use of the hunter harvest system; however, this system requires that landowners and hunters work together toward achieving a desired harvest goal. Allowing controlled hunter access to areas in need of deer population control is the most effective and efficient management tool available to the landowner.

SUMMARY:

1. The present deer management system has continued to exert harvest pressure on white-tail antlerless deer to reduce the population level. The program is working in most areas of the state. There are, however, those areas that require additional population control efforts.

2. The present management system continues to make efforts toward an increasing yet controllable mule deer population. This requires special consideration where mule deer and white-tail populations exist together. Harvesting of antlerless mule deer will be undertaken when herd control is necessary.

3. Trophy buck management continues to be an important criteria in the deer management program.

4. The Kansas deer population has remained healthy and productive.

5. The Commission and the Department have taken numerous recent steps to simplify the administration of the deer management system, permitting methods, and regulations to improve our management of Kansas deer.

THE FUTURE

In planning for future deer management in Kansas, the question is "how can we plan so that in the next 25 years we can look back and see a deer population that is: (1) managed within landowner tolerance limits, (2) producing quality bucks for those who hunt deer in Kansas, and (3) producing significant days of outdoor recreational opportunity?" The discussion of planning can be directed at "short range" and "long range" efforts.

SHORT RANGE PLANNING:

Some of the areas covered under the short range aspect of deer management planning have been implemented and have become a part of the recent management system. Management areas considered short range include:

Permit increases/decreases - Permit quotas have been increasing (Fig. 4) in response to an increasing deer population and a desire to increase the deer harvest. However, where populations are showing signs of stabilization or decline, permit numbers are reduced. Permit decreases are primarily in the number of

"antlerless only" permits. The numbers and types of permits will continue to be determined primarily by biological information on the Kansas deer herd.

Antlerless harvest - "Antlerless only" permits have been issued for the past 9 years in an effort to increase the harvest of does for effective deer herd control. Figures 11, 12 and 13 illustrate the increased percent antlerless deer in the harvest. Most of these permits have been directed at the harvesting of white-tailed deer; however, more recently, the harvest of antlerless mule deer has been increased. The use of "antlerless only" permits continues to be a valuable management tool.

Special seasons - The 1987 Legislature provided the statute necessary to set special seasons. Special seasons, recommended by the Department and approved by the Commission, are set separately from the regular deer season and done so with the intent of achieving additional deer harvest above that obtained during the regular season. This statute allowed a hunter having a permit for the regular season to obtain a permit for the special season. This authority has been used in 1988 and 1990 in an effort to obtain additional harvest of antlerless deer in the Reno-Harvey County area and in the Chautauqua Hills area (Unit 12) (Fig. 5). Special seasons should continue to be available for use where necessary.

Landowner considerations - The following are some considerations presently provided the landowner/tenant (LO/T) in Kansas:

- 1) Fifty (50%) percent of the authorized firearms permits are allocated for LO/T and their immediate family living in the household.
- 2) The cost of a deer permit to the LO/T is one-half of the general resident cost.
- 3) If unsuccessful in the drawing process, a LO/T can obtain a permit to hunt on their own land.
- 4) Immediate family members living with the LO/T are eligible for landowner permits. However, the statute does require that the LO/T own or operate at least 80 acres for each permit applied for.
- 5) A LO/T or their immediate family living with the LO/T can hunt on land they own or operate without a hunting license, but they are required to have a deer permit.

While these considerations are currently given to LO/T, it is possible that these considerations may not be the best type of management we can provide and there may be additional considerations that should be provided landowners. For instance, it would be useful to provide landowners with easier routes to obtain deer hunting permits for use on their own land and perhaps at a different price. In addition, it may be desirable to provide for more equitable distribution of permits to the general population.

Bag limits/multiple permits - In 1988 and 1989, firearms permits that were unissued after the first drawing were made available as a second permit and the "leftover" permit is valid for the archery and firearms season. Unit archery permits were also available for archers as a second permit in 1988 and 1989. These permits are "antlerless only" and limit the hunter to a specific management unit. In 1989, up to three bonus "antlerless only" permits could be purchased for units 12 and 13 (Fig. 5).

Non-residents - State statutes do not allow general non-resident deer hunting in Kansas, but do allow for the issuance of non-resident landowner deer permits. In 1989, non-resident landowner deer permits were available but restricted the landowner to hunting only on his own property. Because Kansas is the only state in the U.S. that does not allow some general nonresident deer hunting, this issue will continue to be debated in the future.

Fees - No significant changes have occurred in permit fees for the last 6 years. The fee structure needs to be closely examined for possible change to allow increased deer management capability.

Mid-week opener - First used in 1988, the opening of firearms deer season on a Wednesday has reduced opening weekend hunting pressure. It has also allowed landowners an opportunity to hunt their property before the weekend activity and encourages more landowners to open their land for hunting, knowing they have 3 days before the weekend pressure. We need to evaluate season lengths and dates on a regular basis.

Enforcement/regulations - The use of the "dummy" deer has been used to deter road hunting and the use of forensic technology are examples of enforcement techniques being developed. The review of regulations for enforceability and effectiveness is a continuing process. The Department continues to work with the Commission to improve regulations related to management.

Public relations/education - Information and education programs are a continuing process in an effort to help the public better understand our deer management program.

Management units and surveys - The 18 deer management units have served the program well, but are subject to change if needed for better management of the deer resource. Surveys are necessary tools for the assessment of population status and user group performance and attitudes. Continued evaluation of surveys is necessary to assure that the information collected is reliable measure of population parameters.

Administration - The Department and the Commission have made numerous changes in the administration of the deer management program to improve the system of issuing permits, to shorten turn-around time on information, and to improve management. For instance, during the application period for the 1989 seasons, all deer hunters from previous years received applications via direct mail from the Department rather than being required to obtain applications from other sources. The application itself was changed to simplify the process of applying for a permit. In addition, the Department now uses across-the-counter sales of deer permits where possible to make it easier to obtain a license. Numerous regulatory changes, including sales throughout the season, have made it easier to administer the program and thereby provided improved services to the public. Such administrative changes, fostered by the Commission and the Department, will continue to improve the management of Kansas deer.

Although this list of "short range" management items may not be complete, it does illustrate that changes are occurring, and those changes have made for better management of the deer population and greater opportunity for Kansas deer hunters.

LONG RANGE PLANNING:

Discussion of long range deer management planning requires a review of the Departments "A Plan for Kansas Wildlife and Parks". This 200 page document includes strategic plans for all Department programs, deer is one of those programs. The deer strategic plan is the result of the combined effort of a 10 member Deer Planning Committee comprised of Department personnel and interested non-department persons. The strategic plan, which is updated at 5 year intervals, provides the foundation for developing present and future deer programs.

The statewide strategic deer plan goal is:

"to manage the deer population at levels consistent with existing habitat and landowner tolerance, and to provide for recreational use."

The strategic plan provides 5 statewide objectives.

1. "To stabilize the statewide deer population at a level that will provide a deer-vehicle collision reporting rate of 400 deer per billion vehicle miles."
2. "To provide a sufficient deer harvest (at least 35,000) to maintain a stabilized population level."
3. "To provide for hunter success rates (at least 30 percent for archery and 60 percent for firearms) and/or permit numbers (at least 60,000 firearms and 20,000 archery) necessary for achieving deer harvest objectives. Maintain hunter use day levels of at least 400,000."
4. "To maintain a buck age ratio of no more than 60 percent yearlings in the harvest."
5. "To provide for a preseason buck:doe ratio of 1:3."

The planning effort requires the identification of problems that may hamper the achievement of goals and objectives, and it requires the identification of candidate strategies to address solutions to the problems. Several problems and strategies were identified by the Deer Planning Committee.

Problem: Public attitudes toward the deer resource can hinder deer population management programs.

- Strategies:
1. Improve efforts to assist landowners with animal damage control.
 2. Communicate and develop programs with other agencies, groups and individuals to address deer damage concerns.
 3. Continue efforts to inform and educate the public relative to deer management in the state.

The deer has been rendered to the level of a "pest" in some areas of Kansas, and this attitude needs to be buffered. Public

attitudes need to be understood and assistance programs need to be implemented to change negative attitudes toward the deer resource.

Problem: Data are lacking pertaining to deer ecology and human-use dimensions (consumptive and nonconsumptive).

- Strategies:
1. Obtain population abundance and dynamics information. More complete population dynamics information would allow development of population simulation models, increasing the ability to predict affects of changing management decisions.
 2. Determine the extent to which deer damage occurs in the state and develop deer damage assessment procedures and models.
 3. Monitor changes in land use trends and habitat conditions in the state. Determine habitat requirements for deer in Kansas.
 4. Determine the carrying capacity for deer in Kansas. This includes the biological, sociological and economical limits for deer population levels.
 5. Obtain information relative to the public attitudes toward the deer resource and its management, and the desires of the public.
 6. Develop procedures for monitoring and reacting to deer diseases.

Problem: Unacceptable hunter behavior and ethical conduct are increasing.

- Strategies:
1. Increase enforcement of laws and regulations. Implement selective enforcement and review existing regulations for "loop holes".
 2. Develop enforceable regulations relative to party hunting and illegal use of vehicles.
 3. Increase emphasis on ethics in hunter safety training.
 4. Increase fines assessed for violations.

5. Target increased information-education and law enforcement efforts in areas experiencing greatest problems.
6. Increase emphasis on reward-for-information program.
7. Inform and educate judicial system relative to ethical behavior problems.

Hunter behavior and ethical conduct is a difficult area to effect change or even establish what acceptable hunter behavior should be. It is nearly impossible to legislate or regulate peoples behavior. However, it is probably the number one area that the Department is most faced with from public concern and comments.

Problem: The permit issuance system is finding it increasingly difficult to meet increasing permit demands as the result of changing harvest management strategies.

- Strategies:
1. Increase staffing and equipment upgrading in licensing and data processing.
 2. Evaluate the permit application/issuance process.

Personnel in the Licensing and Data Processing Departments continue to do a commendable job in meeting the challenge of changing programs. Some changes in the permitting system have taken place, changes that will better serve the public and the deer resource.

Problem: The distribution of hunters is not consistent with deer permit quotas and deer harvest objectives.

- Strategies:
1. Better inform hunters of units with unfilled permits.
 2. Evaluate fee structure, multiple permits bag limits and nonresident hunting as means to encourage hunter participation in harvest programs.
 3. Evaluate unit boundary adjustments to provide a distribution of hunters necessary to meet deer harvest objectives.
 4. Use special seasons to achieve a desired distribution of hunters to meet deer harvest objectives.

5. Encourage cooperation and coordination between deer hunters and landowners in need of deer herd control.

The strategic plan and continued planning efforts provide the mechanism for initiating change. For deer management policies and programs to be accomplished successfully, it requires the assistance and cooperation of all divisions within the Department of Wildlife and Parks. The success of the deer management program also requires the support and assistance from the Kansas public for initiating new programs and for carrying those programs to a successful end.

SUMMARY

It is clear that our basic management strategy for deer in Kansas is sound and acceptable to the public. We do not visualize that this will change in the near future. However, some changes are necessary as indicated in the above statements. Some of these changes will require Legislative approval since the law related to deer clearly establishes the boundaries of the Department and Commission authority. In addition, many improvements may be made by the cooperative action of the Commission and the Department through regulations. Such changes will be done with full public input and in open meetings of the Commission.

The development of successful deer management programs for Kansas requires a working partnership between all who are interested in the well-being of the deer resource. Without this cooperative relationship, most programs are destined to failure. Working together, Kansas can continue to provide a quality, yet controllable deer herd. A deer resource that future generations of Kansans can enjoy.

Table 1. Summary of archery deer hunting season data, 1965–1988.

Year	Season Dates	No. of Days	Permits Issued	Active Hunters	Harvest	Percent Success
1965	Oct. 1 – Nov. 15	46	1,220	1,151	164	14.2
1966	Oct. 1 – Dec. 9	70	2,345	2,234	376	16.8
1967	Oct. 1 – Nov. 26	57	2,988	2,739	434	15.8
1968	Oct. 1 – Dec. 1	62	3,807	3,491	614	17.6
1969	Oct. 1 – Nov. 30	61	3,936	3,539	563	15.9
1970	Oct. 1 – Nov. 30	61	4,479	4,083	796	19.5
1971	Oct. 1 – Nov. 25	62	4,672	4,173	576	13.8
	Dec. 11 – Dec. 31					
1972	Oct. 1 – Nov. 30	61	4,123	3,660	664	18.1
1973	Oct. 1 – Nov. 25	73	5,400	4,730	892	18.8
	Dec. 15 – Dec. 31					
1974	Oct. 1 – Nov. 30	72	6,243	5,532	1,130	20.4
	Dec. 21 – Dec. 31					
1975	Oct. 1 – Nov. 30	73	5,609	5,043	1,136	22.5
	Dec. 20 – Dec. 31					
1976	Oct. 1 – Nov. 30	75	6,054	5,259	1,114	21.2
	Dec. 18 – Dec. 31					
1977	Oct. 1 – Nov. 30	76	6,466	5,333	1,174	22.0
	Dec. 17 – Dec. 31					
1978	Oct. 1 – Nov. 30	77	8,704	7,395	1,738	23.5
	Dec. 16 – Dec. 31					
1979	Oct. 1 – Nov. 28	79	11,679	9,691	2,259	23.3
	Dec. 12 – Dec. 31					
1980	Oct. 1 – Dec. 3	79	12,937	11,189	3,007	26.9
	Dec. 17 – Dec. 31					
1981	Oct. 1 – Dec. 2	79	14,509	12,332	2,939	23.8
	Dec. 16 – Dec. 31					
1982	Oct. 1 – Dec. 1	79	14,924	12,975	3,441	26.5
	Dec. 15 – Dec. 31					
1983	Oct. 1 – Nov. 30	81	15,764	13,694	3,916	28.6
	Dec. 12 – Dec. 31					
1984	Oct. 1 – Nov. 30	83	15,240	13,281	4,167	31.4
	Dec. 10 – Dec. 31					
1985	Oct. 1 – Dec. 6	83	16,204	13,882	4,230	30.5
	Dec. 16 – Dec. 31					
1986	Oct. 1 – Dec. 5	83	15,703	13,291	4,356	32.8
	Dec. 15 – Dec. 31					
1987	Oct. 1 – Dec. 4	83	14,892	12,385	4,329	35.0
	Dec. 14 – Dec. 31					
1988	Oct. 1 – Nov. 29	80	14,975	13,282	5,118	38.5
	Dec. 12 – Dec. 31					

Table 2. Summary of firearms deer hunting season data, 1965-1988.

Year	Season Dates	No. of Days	Permits Issued	Active Hunters	Harvest	Percent Success
1965	Dec. 11 - Dec. 15	5	3,925	3,546	1,340	37.8
1966	Dec. 10 - Dec. 14	5	5,806	5,433	2,139	39.4
1967	Dec. 8 - Dec. 12	5	6,450	6,030	1,542	25.6
1968	Dec. 13 - Dec. 17	5	6,372	5,994	1,648	27.5
1969	Dec. 6 - Dec. 10	5	7,593	7,143	1,668	23.4
1970	Dec. 5 - Dec. 9	** 5 - West	8,956	8,402	2,418	28.8
	Dec. 5 - Dec. 13	9 - East				
1971	Dec. 4 - Dec. 8	5 - West	8,618	8,022	2,569	32.0
	Nov. 27 - Dec. 5	9 - East				
1972	Dec. 2 - Dec. 6	5 - West	8,059	7,490	2,318	30.9
	Dec. 2 - Dec. 10	9 - East				
1973	Dec. 1 - Dec. 9	9	8,952	8,349	3,220	38.6
1974	Dec. 7 - Dec. 15	9	10,961	10,246	4,347	42.4
1975	Dec. 6 - Dec. 14	9	11,066	10,442	4,352	41.7
1976	Dec. 4 - Dec. 12	9	11,124	10,267	3,955	38.5
1977	Dec. 3 - Dec. 11	9	11,625	10,541	3,766	35.7
1978	Dec. 2 - Dec. 10	9	12,461	11,484	4,942	43.0
1979	Dec. 1 - Dec. 9	9	13,399	12,243	5,810	47.5
1980	Dec. 6 - Dec. 14	9	15,014	13,784	7,296	52.9
1981	Dec. 5 - Dec. 13	9	19,408	17,948	9,413	52.4
1982	Dec. 4 - Dec. 12	9	21,079	19,633	11,446	58.3
1983	Dec. 3 - Dec. 11	9	23,032	21,232	13,640	64.2
1984	Dec. 1 - Dec. 9	9	30,599	28,626	19,446	67.9
1985	Dec. 7 - Dec. 15	9	33,754	31,095	21,296	68.5
1986	Dec. 6 - Dec. 14	9	41,119	37,617	24,123	64.1
1987	Dec. 5 - Dec. 13	9	48,932	44,860	29,179	65.0
1988 *	Jan. 2 - Jan. 10	9	4,590	4,044	2,485	61.4
	Nov. 30 - Dec. 11	12	57,784	51,559	35,236	68.3

* Special season.

** Western and eastern areas of state open difference dates.

Figure 1. Statewide deer-vehicle accident index, 1965-1988.

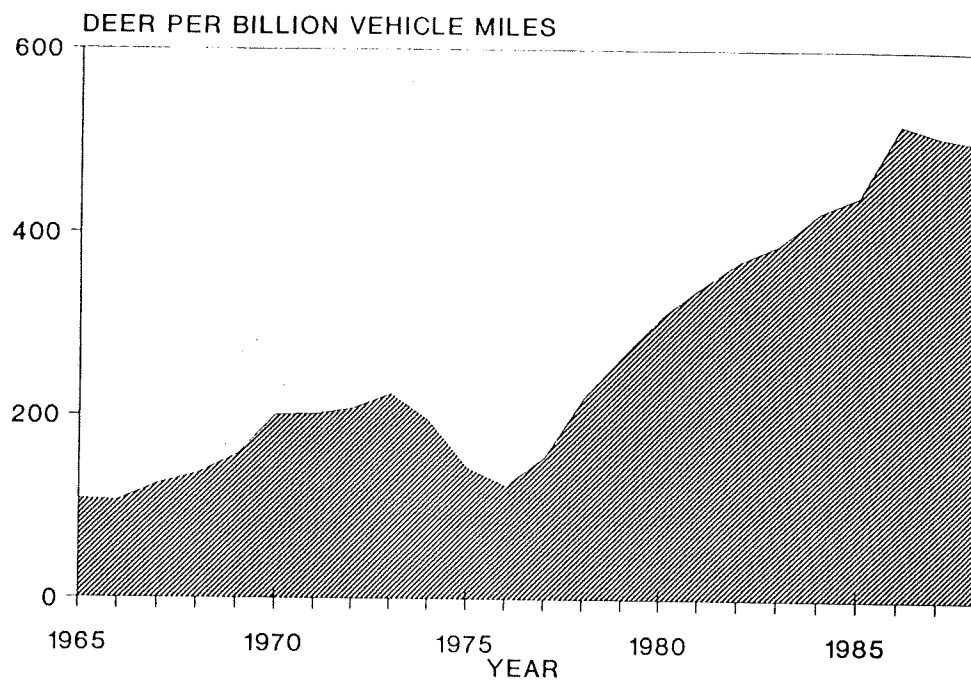


Figure 2. Trend of change in deer population as indicated by respondents to the landowner deer survey, 1964-1985.

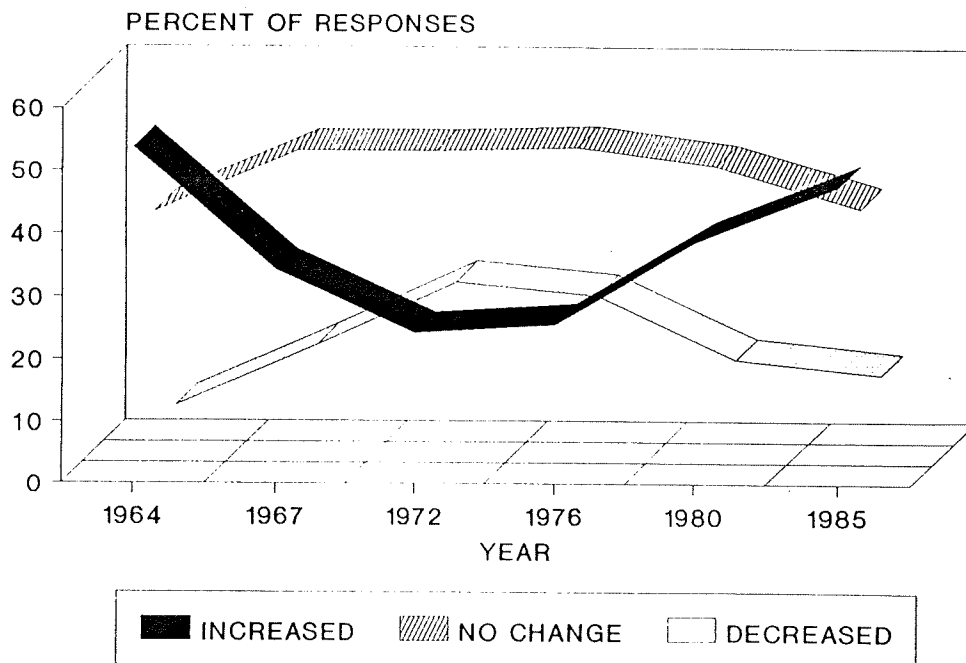


Figure 3. Archery and firearms hunter success, 1965-1988.

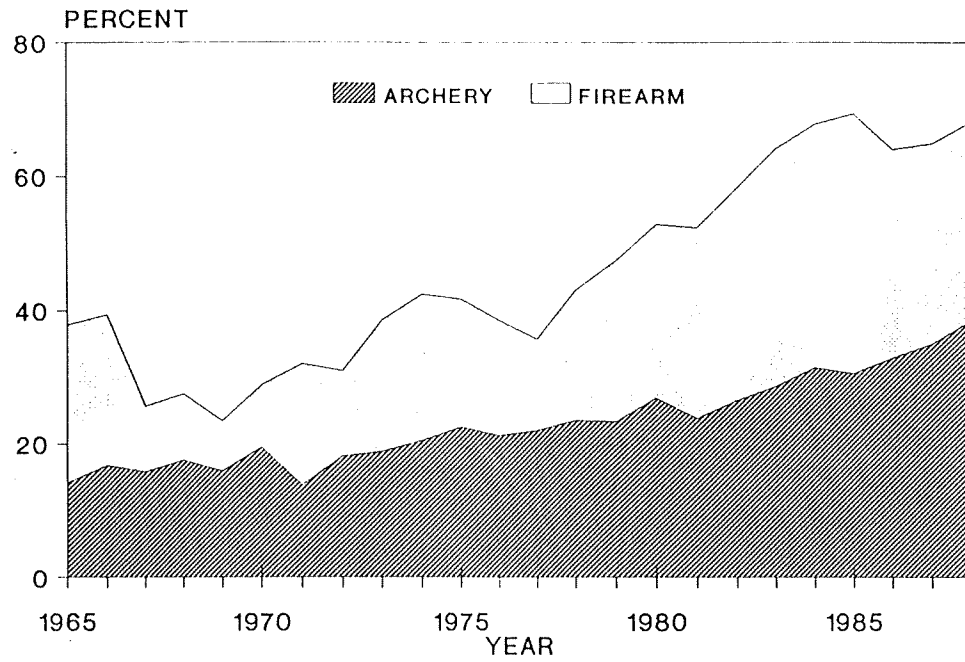
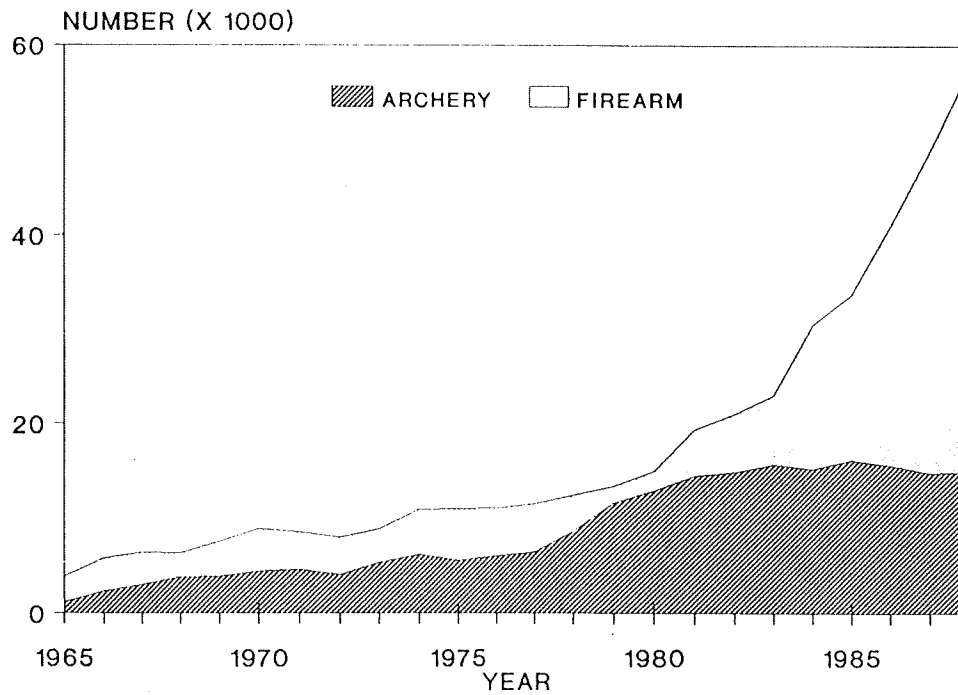


Figure 4. Number of archery and firearms permits issued, 1965-1988.



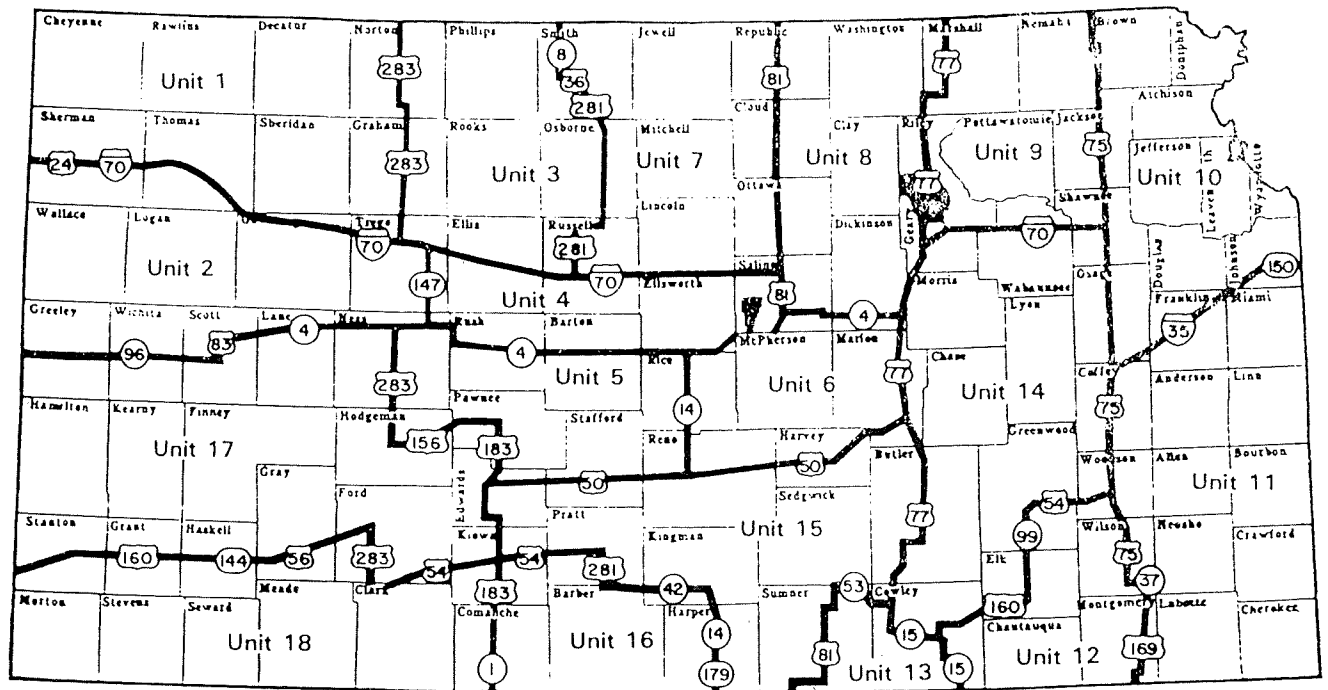


Figure 5. Kansas deer management units.

Figure 6. Average buck harvest age structure, 1984-1988.

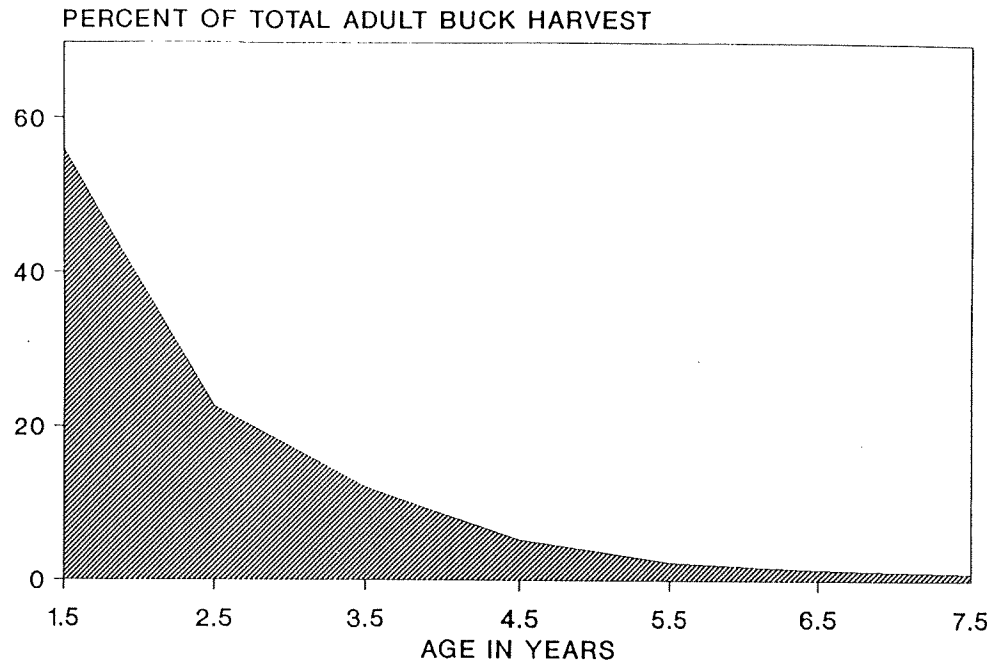


Figure 7. Percent yearlings in buck harvest, 1971-1988.

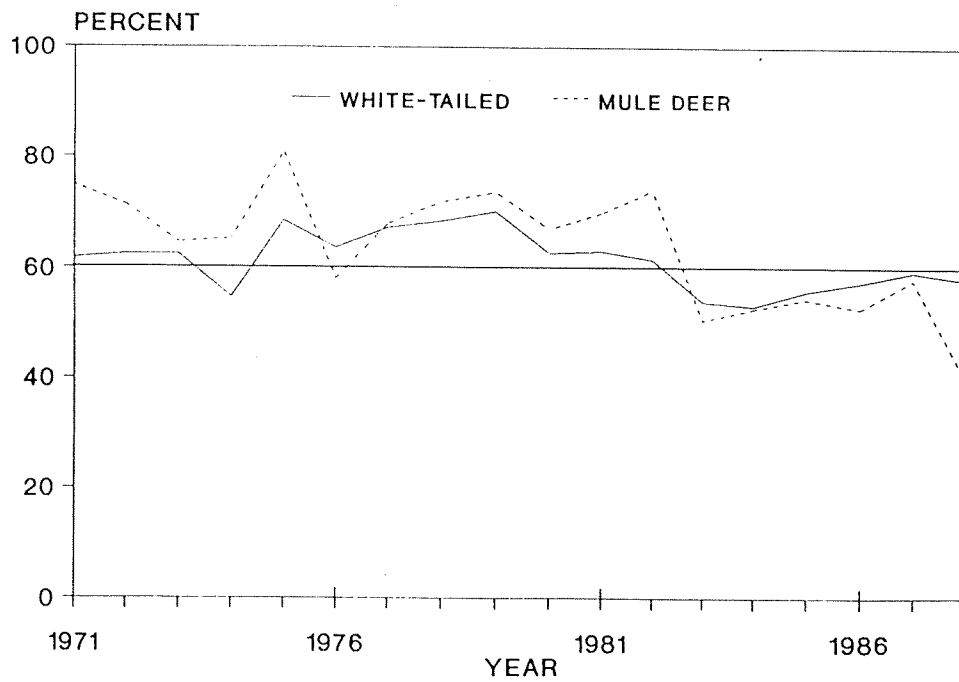


Figure 8. Mandays of archery and firearms deer hunting, 1965-1988.

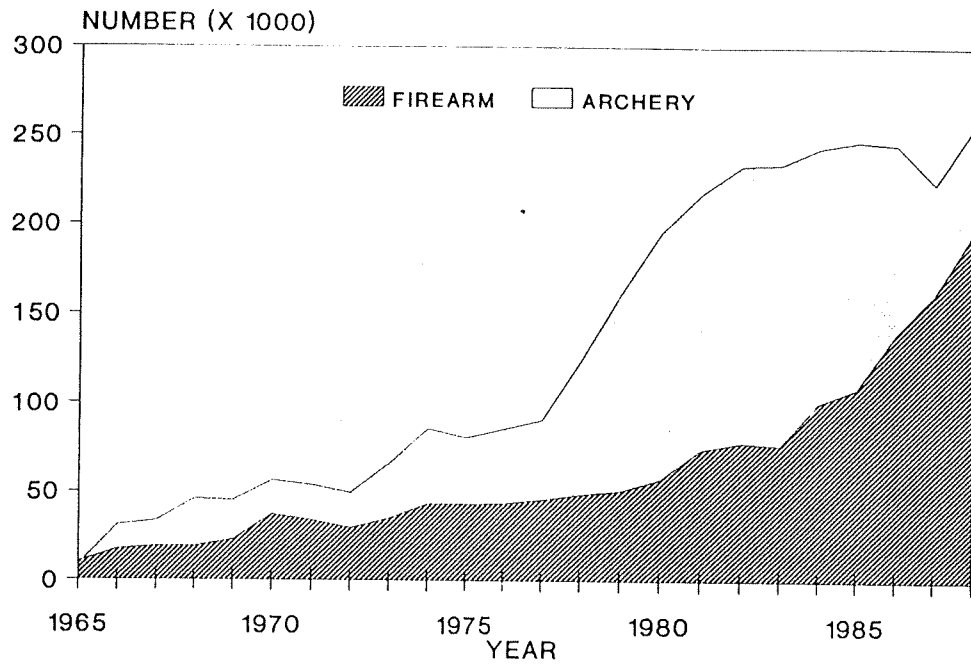


Figure 9. Reported crop damage by deer, from landowner deer survey respondents, 1964-1985.

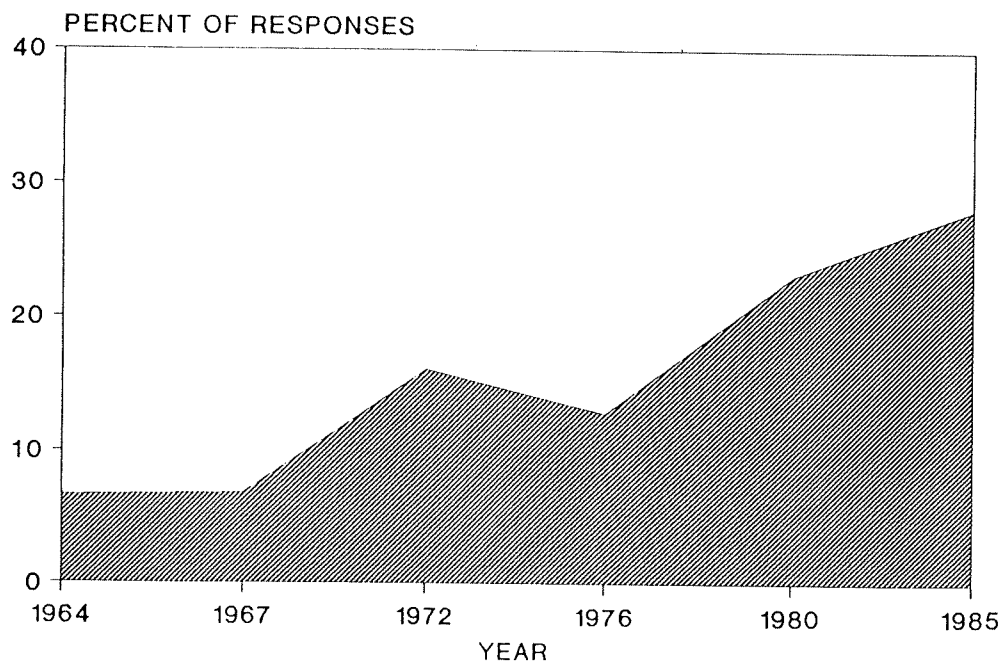


Figure 10. Archery and firearms deer harvest, 1965-1988.

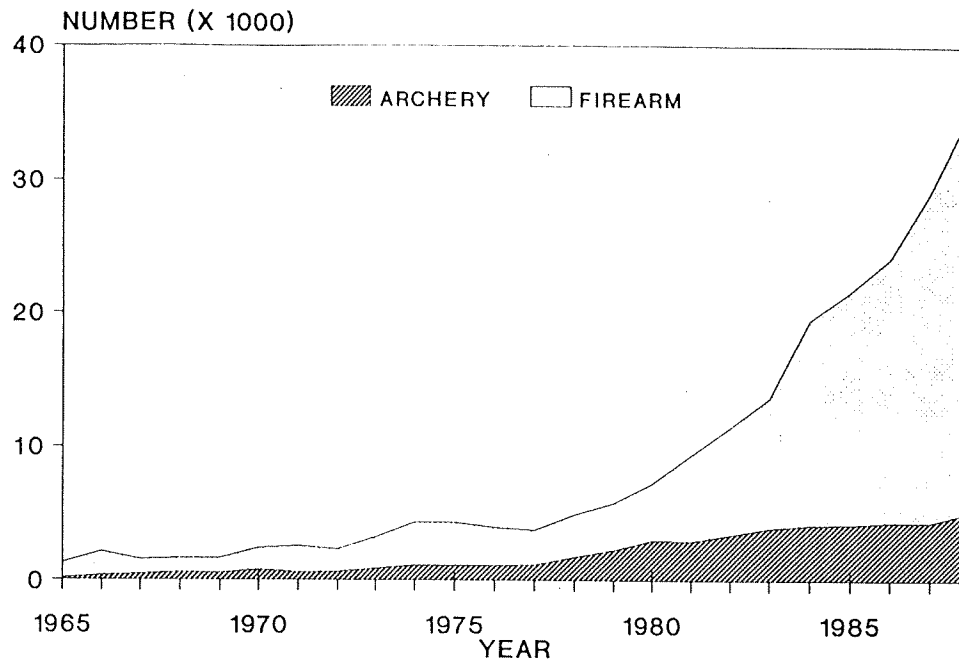


Figure 11. Percent antlerless deer in the white-tail and mule deer firearms harvest, 1965-1988.

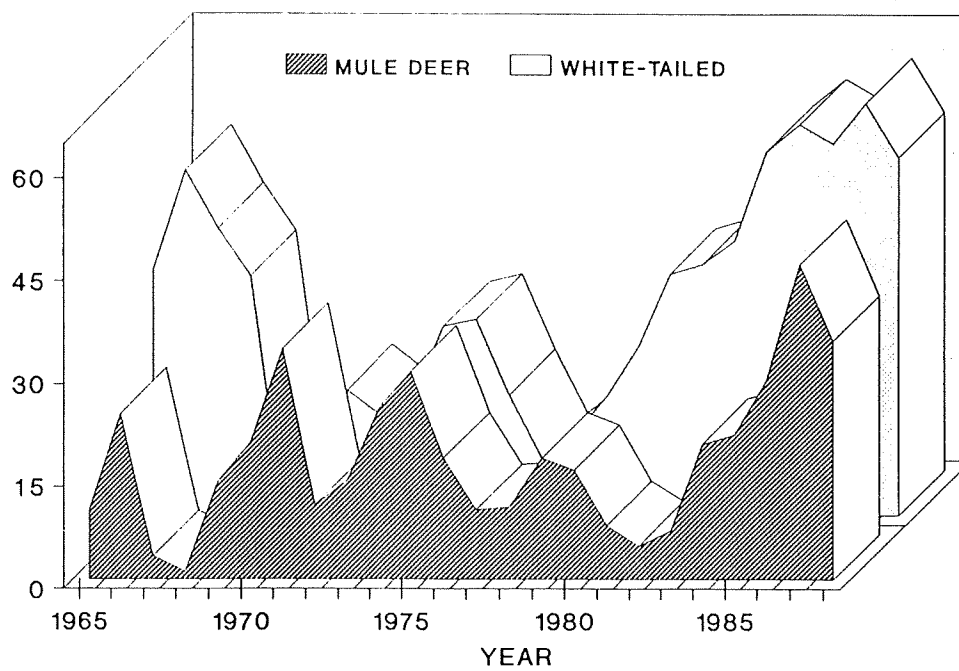


Figure 12. White-tailed deer firearms harvest and percent antlerless deer in the harvest, 1965-1988.

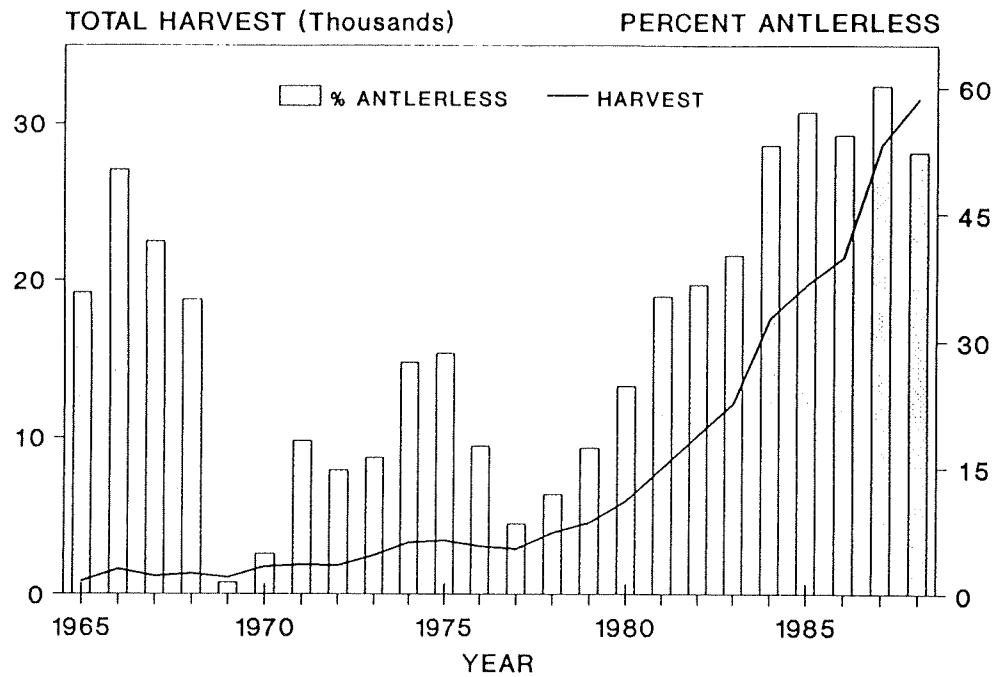


Figure 13. Mule deer firearms harvest and percent antlerless deer in the harvest, 1965-1988.

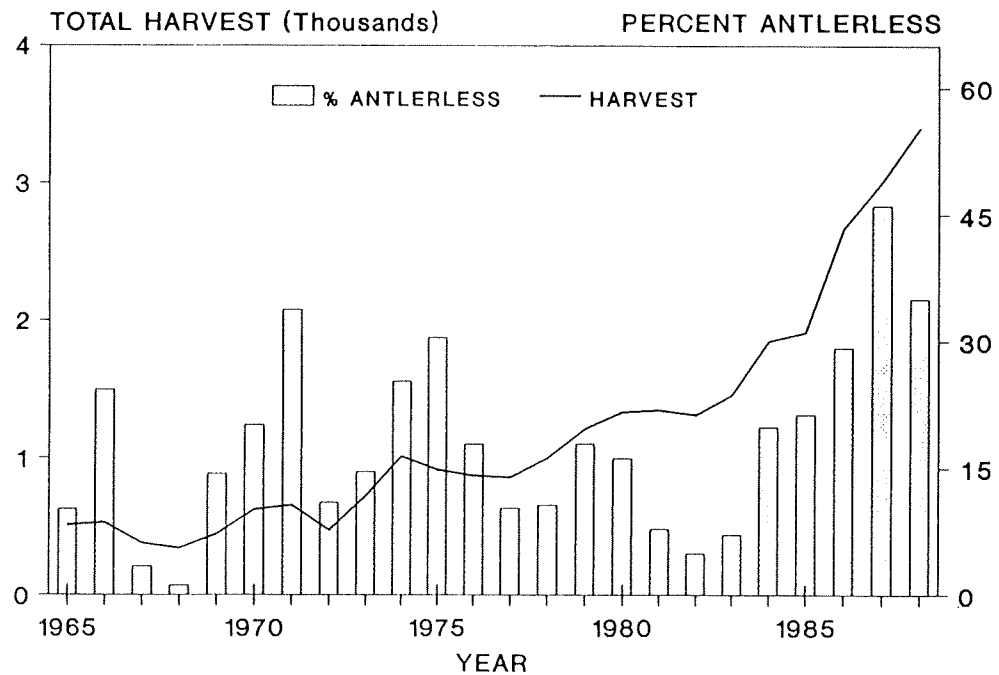


Figure 14. Total firearms deer harvest by species,
1965-1988.

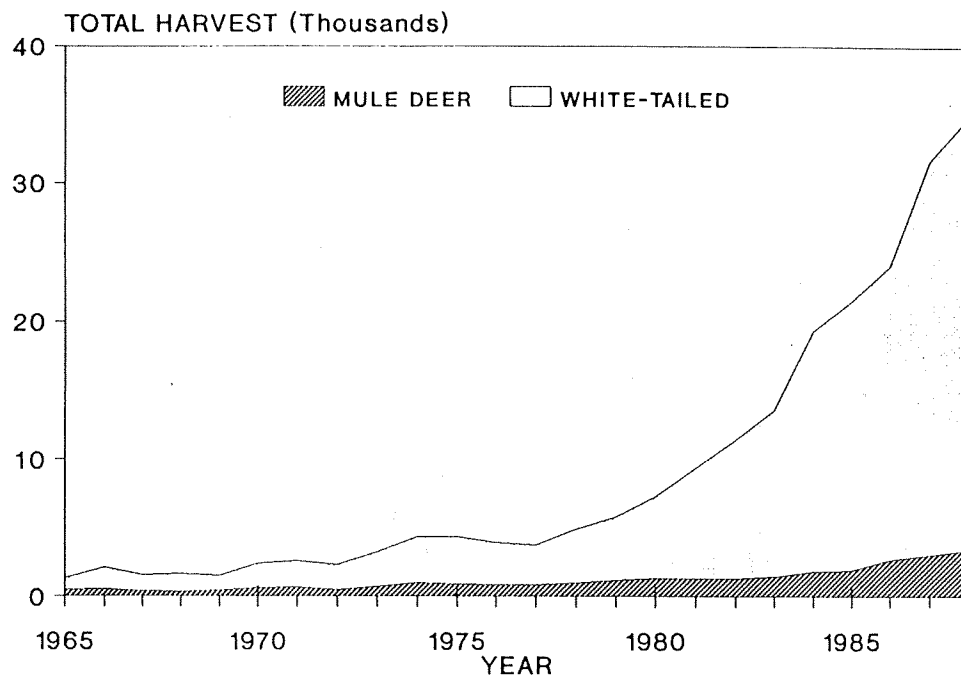


Figure 15. Deer-vehicle accident index by Kansas Department of Transportation Districts, 1975-1988.

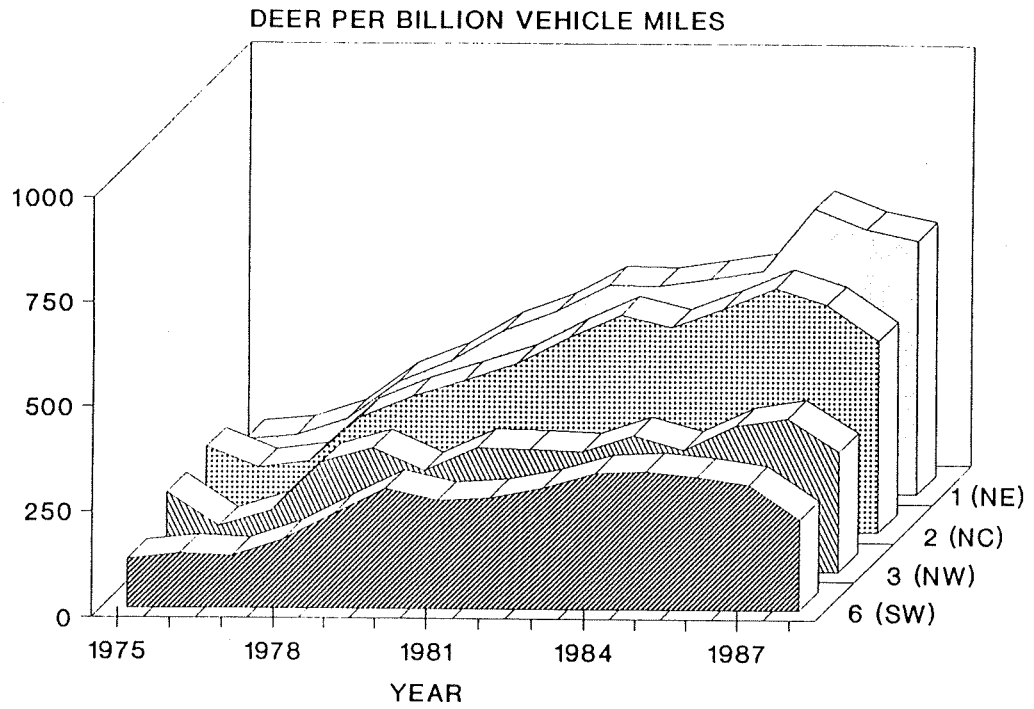
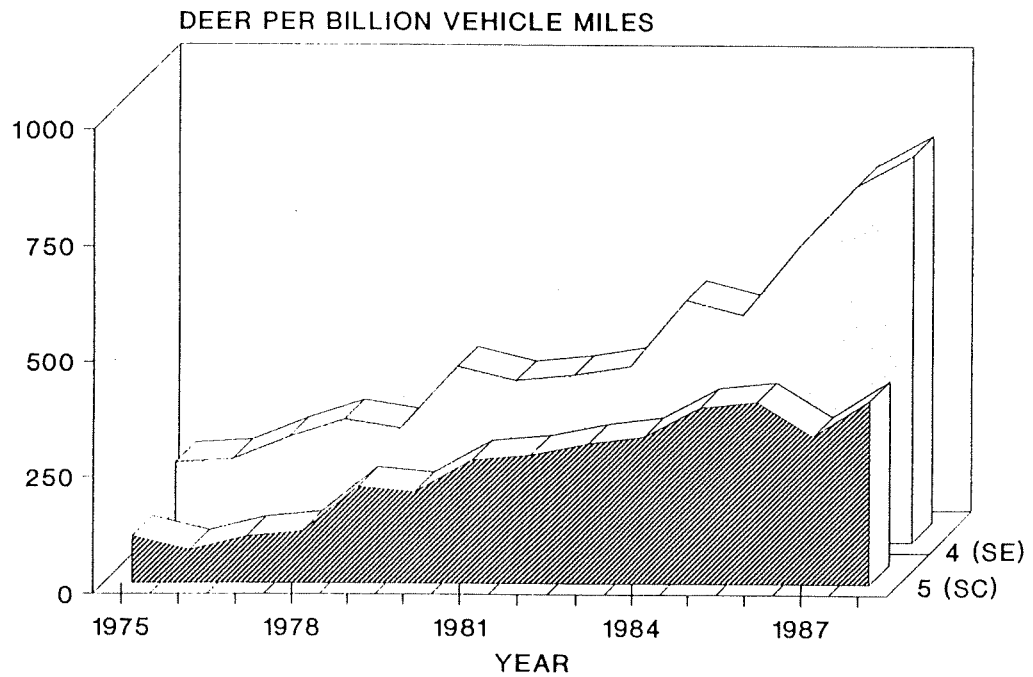


Figure 16. Deer-vehicle accident index by Kansas Department of Transportation Districts, 1975-1988.



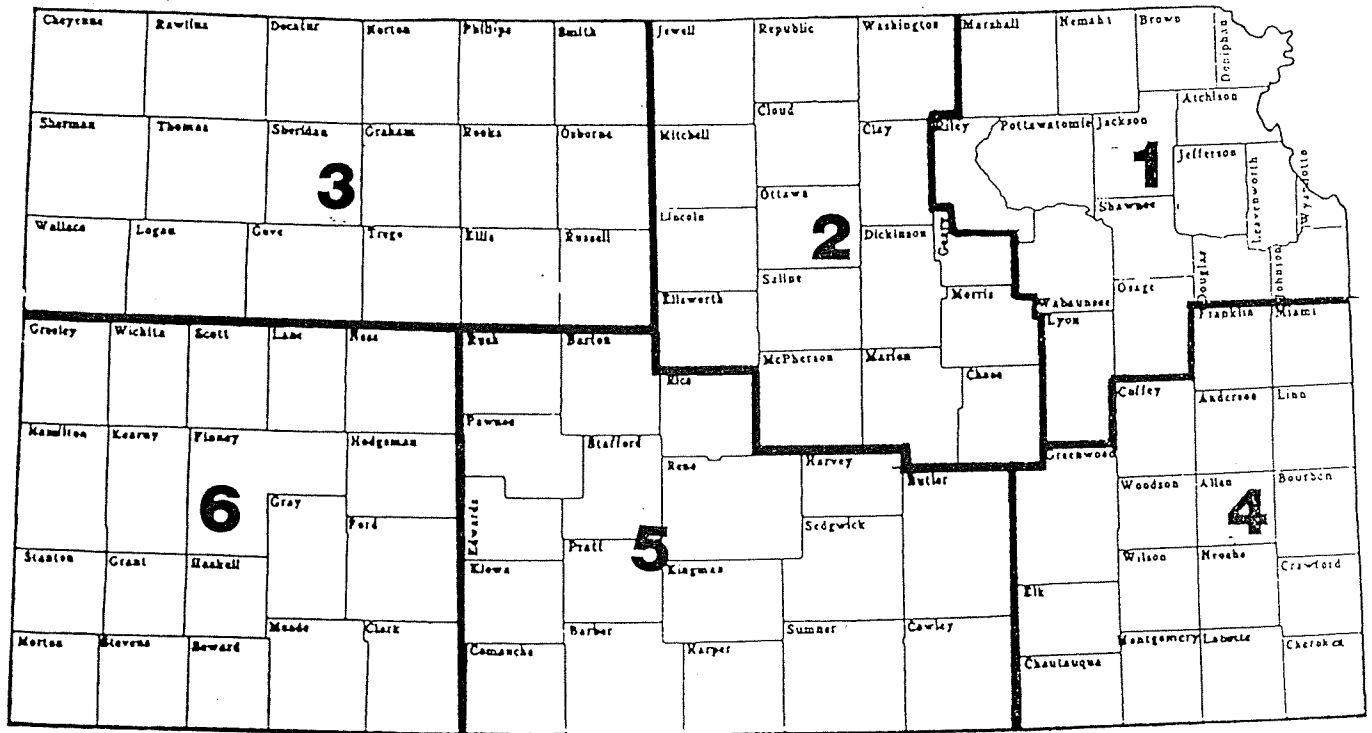


Figure 17. Kansas Department of Transportation districts.

KANSAS DEER

— *resource
on the
rebound*

Keith Sexson
Bill Hlavachick
Wayne van Zwoil

HISTORY

Evolution and Distribution

Deer evolved during the Miocene period, some 15 to 20 million years ago, all members of the Cervidae family wandering over from Asia on the long-since-inundated Bering Sea land bridge. The Miocene was the age of mammals, and North America teemed with game. During the following Pleistocene period, however, great droughts and glaciation wiped out entire sub-orders of mammals. Deer survived, adapted and prospered in spite of drastic environmental changes and predation. Today there are some 30 subspecies of the whitetail and 10 of mule deer occupying North America from coast to coast, Panama to Alaska.

Two subspecies of whitetails thrive in Kansas. The Texas variety (*Odocoileus*

virgatus texanus) inhabits the western two-thirds of the state and the Kansas whitetail deer (*O. v. macrourus*) the remainder. In the western third of Kansas, whitetails share the range with Rocky Mountain mule deer (*Odocoileus hemionus*), largest of the mule deer.

Kansas: The Early Days

The pre-settlement prairies of Kansas swarmed with buffalo and antelope, even elk; but deer were not common beyond the state's eastern woodlands. Fires maintained the prairie ecosystem and reduced or eradicated woody growth. Frequent flooding and the scouring action of water restricted woody plant invasion along streambanks. While deer did play a significant role in the settlement of this state, particularly in the eastern third, they were of secondary importance. Bison provided most of the meat, hides, and bones used by Indians, explorers, trappers, and settlers.

Whitetails were originally found just about anywhere there was woody cover. The Lewis and Clark Expedition reported a large concentration of deer on the banks of the Missouri River near the present site of Kansas City in 1804, and Zebulon Pike found deer in eastcentral Kansas in 1806. Herds of mule deer were reported along the upper reaches of the Smoky, Saline, and Solomon as late as 1866. The Junction City Union of December 24, 1970 stated that "there have been thirteen deer killed in the bottom about a mile from town during the past two weeks."

Judging from these and other reports, deer were more or less common along the wooded portions of streams and in large timbered areas until about 1884. By 1890, deer had disappeared from most of western and northern Missouri and maintained a precarious existence in the southern Ozark areas. In general, deer numbers in the United States hit a low between the years 1875 and 1915. Deer were declared extirpated in Kansas in 1904.

Deer were not abundant anywhere on the Plains following the drought of the 1930s and were still considered absent from Kansas in 1933. The prolonged drought, however, allowed woody plants to become established along streams. Shelterbelts were planted and flood control structures were built. As woody vegetation thrived, so did deer.

The Kansas Fish and Game Commission and several private individuals stocked deer in various parts of the state in the late thirties and early forties. This was a minor effort compared to the extensive trapping and transplanting pro-

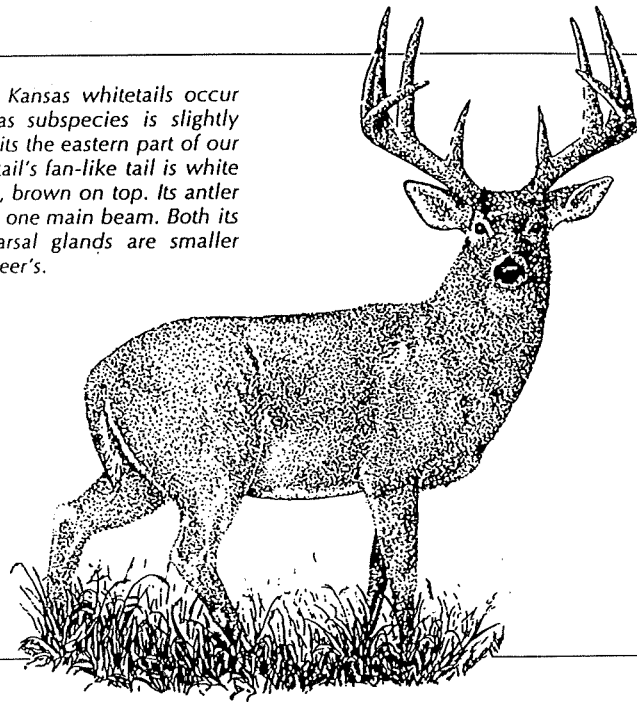
grams being carried out by states surrounding Kansas. During this period, deer were increasing in Missouri, Nebraska, and Colorado. By the early 1950s deer were being seen frequently in Kansas. Since then their population has not stopped growing. Estimated in 1908 to number only 500,000, deer in the U.S. now total over 19 million!

BIOLOGY

The Animal

Most hunters, as well as knowledgeable non-hunters, look on deer as being much larger than

Both Texas and Kansas whitetails occur here. The Kansas subspecies is slightly larger and inhabits the eastern part of our state. The whitetail's fan-like tail is white only underneath, brown on top. Its antler tines spring from one main beam. Both its ears and metatarsal glands are smaller than the mule deer's.



Mike Miller illustration

they really are. An adult whitetail buck will rarely stand over waist-high to the average man; the chest may be just 18-20 inches deep with the belly only 23 inches from the ground. The little Florida Key version of the whitetail is in the size range of the average collie. On the Island of Coiba off Panama, a big adult buck may weigh no more than 50 pounds!

Northern representatives of a race tend to be larger than their southern counterparts, and this holds true for both mule and whitetail deer. Whitetails from the northern U.S. and southern Canada are typically the largest, though deer from our corn belt can grow to prodigious weights. A hunter in Iowa downed a monster whitetail in 1962 that scaled 440 pounds. In 1941 a Wisconsin hunter brought in a whitetail that

weighed, field dressed, 378 pounds. And in 1955 a Maine hunter downed a buck that scaled 355 pounds after having been dressed and hung for three days! Mule deer can be even bigger; live weights of up to 475 pounds being recorded. These monsters are rare, though, and a Kansas buck — whitetail or mule deer — that dresses over 250 pounds is *big*!

One of the most interesting physiological characteristics of a deer is its antlers. There is a significant difference between antlers and horns. Antlers are shed annually, to grow anew every summer and harden in the fall. Horns are never shed and continue to grow throughout the animal's life. If a horn is broken off it will not grow back. Cattle, bison, sheep, goats, and antelope have horns. (The pronghorn antelope, inci-

dentally, is not a true antelope; it is the one horned animal that sheds a part of its horn annually. Only the outside layer is lost, after which a new layer is formed around the remaining core.)

Antlers are found on all members of the deer family, including elk, caribou, and moose. Whitetail antlers have one main beam from which the tines branch one at a time. The tines are not normally branched. Mule deer antlers do not have a main beam. The antler base forks into tines, which on large bucks may branch again. As a rule, both species have brow tines, though these are frequently absent on mule deer.

Both antlers and horns are extended growths of the frontal skull plate. The pedicel, the base from which the antler grows, is a part of this plate. Antlers are true bone, but are solid and have no

m. The base of the antler is called the "burr", and when shed the antler separates from the skull at the junction between the burr and pedicel. New antlers begin growth from the pedicel in April or May. At first they are tender and covered with skin and short hair known as "velvet." This velvety skin, filled with tiny blood vessels, nourishes and builds the growing bone-like material of the antler. Injury to the antler during this stage can cause deformed antlers. Initially, antler growth is slow, but by summer it is extremely rapid and may exceed one-half inch per day. In August and early September the blood supply to the antlers is cut off. They harden, and the velvet dries and sloughs or is rubbed off. Trees that have been savaged by bucks ridding their antlers of velvet are called rubs. Rubs appear as

Fawn bucks do not develop antlers their first fall. The "button buck" will only have bumps, the pedicels, from which antlers will develop the following spring.

The size and shape of antlers depend on nutrition, age and heredity. Large antlers are a product of a diet containing high protein, proper amounts of fats and carbohydrates, and adequate minerals like calcium and phosphorous. Body growth of a deer is rapid from birth to two years of age, slows during the second and third years, and plateaus in the fourth year. The first 18 months of life, most of the nutritional intake is used for body growth, leaving only minimum amounts for antler development. After the deer has reached maximum body size, a greater amount of the nutritional intake can be used for antler develop-

tributes greatly to the occurrence of spike bucks.

In addition to the tail and antlers, one other physical characteristic can be used to differentiate between the mule deer and whitetails: their glands. All deer have four major external glands that secrete a different scent. These scents are part of the communication system that identifies individual animals.

The preorbitals are tear glands and serve primarily to lubricate and cleanse the eyes. The interdigital gland, located between the hoof lobes, secretes a yellow, waxy, and strong-odored substance. The scent is left on the ground or vegetation each time the deer puts its foot down. The scent helps deer track one another. The tarsal gland is a tufted, discolored patch on the inside of the hind legs. It secretes an oily substance with a strong odor of ammonia. Part of the ammonia smell comes from the habit of the deer deliberately urinating on the gland. Deer check each other by smelling and/or licking the other's hock. The metatarsal glands on the lower outside of the hind legs secrete an oily substance with a strong, musky scent. There is some question as to the role of the metatarsal.

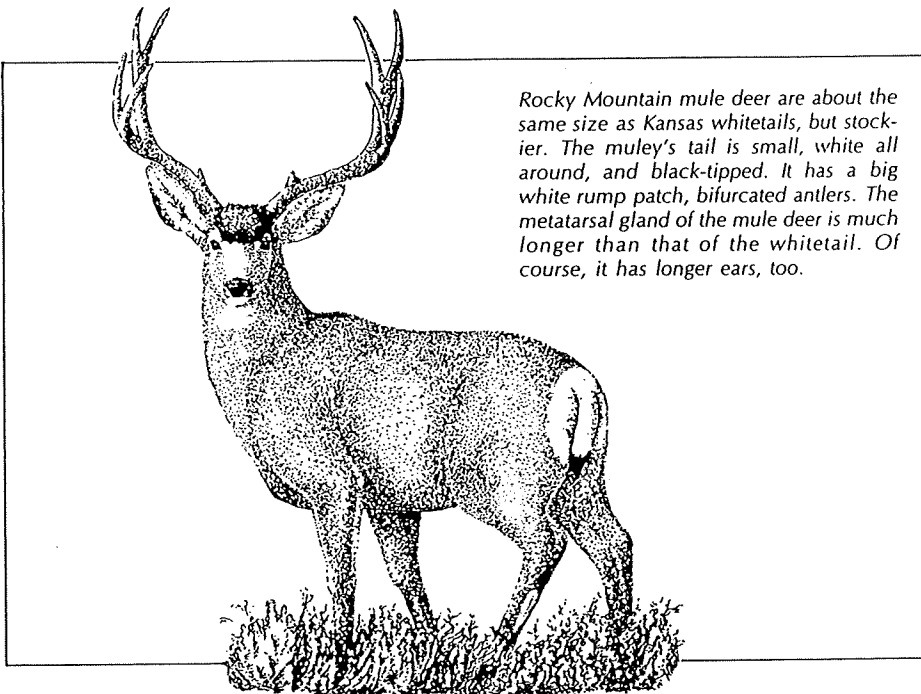
Gland measurements for the whitetail are: preorbital $7/8$ inches long; tarsal, 3 to 4 inches wide; and metatarsal, 1 inch long. A mule deer's preorbital is about $1\frac{9}{16}$ inches long, its tarsal 2 to $2\frac{1}{4}$ inches wide, and its metatarsal 5 inches long.

Reproduction

The mating season for whitetails and mule deer begins in October, with the peak of breeding occurring in mid to late November and extending as late as February. Shortening day length and reduced light intensity in the fall trigger sexual activity in bucks as well as does. The breeding season is known as the rut.

In Kansas, 50 percent of all whitetail doe fawns breed before they're a year old. Less than 10 percent of the mule deer doe fawns breed. About 95 percent of the whitetail does breed as yearlings, but only 60 to 70 percent of the mule deer yearlings breed. Adult does of both species have about the same productivity rates. The average for mature does of both species is 1.25 to 1.50 fawns per doe. Healthy females frequently have twins, and triplets are not uncommon. Does in poor health may never ovulate.

Estrus for the whitetail occurs every 28 days in the fall. Mule deer "cycle" between 22 and 28 days. The estrus period lasts about 24 hours. If the doe is not bred in her first estrus, "heat" will



Rocky Mountain mule deer are about the same size as Kansas whitetails, but stockier. The mule's tail is small, white all around, and black-tipped. It has a big white rump patch, bifurcated antlers. The metatarsal gland of the mule deer is much longer than that of the whitetail. Of course, it has longer ears, too.

early as August and are not associated with the scrapes that appear later during the rut and delineate a breeding territory. Antlers are normally shed in January, though they may be lost as early as November and as late as March. It isn't hard to find discarded antlers in the woods, though rodents quickly chew them up, presumably for their calcium content.

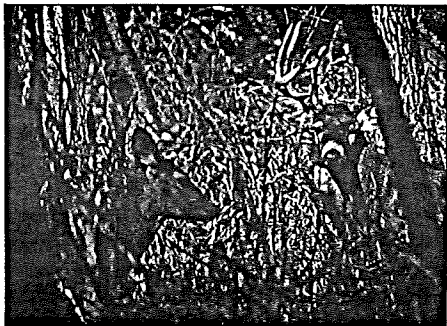
The cycle of antler growth and development is controlled by hormonal secretions caused by changes in the photoperiod. Hormonal imbalances result in deviations from normal antler development. Occasionally does grow antlers. These antlers are usually short, unbranched, covered with velvet, and remain for the life of the animal. This condition is caused by abnormally high levels of testosterone.

ment. For the most part, heredity determines antler shape and number of points, while nutritional levels control the size of antlers. You cannot tell the age of a deer by the number of antler points or size of its rack. Very old deer normally have more massive antlers than they did when at their breeding prime, and occasionally they develop non-typical racks, with heavy burrs, drop tines, and many points in unusual locations.

The occurrence of "spike" bucks in a deer herd concerns deer hunters and managers. Spikes are those bucks that are one and a half years old or older, but with only two hardened points protruding through the skin. Spikes do occur in Kansas, but in relatively small numbers. Where extensive studies have been done, it appears that poor nutrition con-

rec ee to four times before her bre , potential ends for the year. So most does capable of conceiving each year are bred. "Dry does" are generally yearlings or fawns that have not yet been bred. This is particularly true of yearling mule deer does, which usually breed for the first time at 16 to 18 months of age.

Mule deer and whitetails are polygamous, the males wandering extensively in pursuit of does in heat. It is during the rut that bucks become aggressive and are antagonistic toward other bucks.



Gene Brehm photo

This whitetail buck's thick neck is brought on by hormonal changes during the rut. By mid November, Kansas bucks are too busy breeding to eat.

Rutting behavior in whitetails includes urine marking of territories, rubbing and thrashing of antlers in shrubs and trees, antler fighting with other bucks, and herding of individual does. Mule deer bucks may collect small harems. Bucks of both species become sexually mature at 18 months of age. While yearling males are capable of breeding, the presence of mature bucks may limit their participation in the breeding of does.

Bucks expend large amounts of energy during the rut, actively pursuing does and taking little time to feed or rest. Body weight may decrease as much as 10 percent. The presence of active scrapes indicates that the buck has established a breeding territory. Scrapes are made when a buck paws the ground with his hooves and then urinates to impart scent to the scrape. Active scrapes are cleared of leaf litter periodically by the buck and they have a strong musky odor. Does are also more active during the rut and may urinate to signal their location and the start of estrus to the male.

Both whitetail and mule deer bucks will tend a single doe two to three days before the estrus and then accompany her for three to four days after breeding. So a buck is "out of action" for five to seven days per doe bred and is not likely to breed more than four does dur-

ing a 28-day period, servicing twelve or so each season. Bucks in captivity have bred as many as 20 does during a single rut. In Kansas, there is no shortage of bucks to breed receptive does. Most of the breeding is finished before the firearms season begins, and the harvest formula ensures that enough bucks survive the season to continue breeding in following fall.

Fawns are born in late May and June, following a gestation period of about 202 days. This period can vary from 180 to 220 days. Does that were bred later in the winter (primarily fawns) may have their young in July and August. The sex ratio of fawns at the time of birth is about 106 males for each 100 females. Fawn mortality is high. As many as half of the fawns born could be lost before the fall hunting season. Causes for these losses include predation, farm machinery accidents, starvation, fence entanglements, and roadkills.

As fawning time approaches, each pregnant doe seeks solitude. If her fawns of the previous season are still with her she will try to elude them, even striking at them with her front feet in an attempt to drive them away. The fawning site must provide privacy and sheltering cover. No special nest or bed is prepared by the doe before giving birth.

At birth, the fawn weighs six to nine pounds. Both mule deer and whitetail fawns are spotted with white, though mule deer young lack the reddish cast of the whitetail's coat. Fawns retain their mottled pelage for three to four months. During their first month, they remain hidden, the spotted coat providing excellent camouflage. They are essentially scentless for several days — an adaptation to foil predators.

Fawns are left by the doe while she forages, but she is seldom out of touch and returns to feed them. She spends her time some distance from the fawn in order to avoid attracting attention to its hiding place. Because of this separation of doe and fawn, people sometimes find the young deer and assume it has been abandoned. Rarely will a doe abandon her young. If fawns are found they should be left in their bed because the doe is probably hiding only a short distance away.

Fawns depend on their mother's milk until five weeks of age. At two to three weeks they begin to forage, and by the time they're four months old the young are weaned.

As the fawns grow older they begin to accompany the doe for longer distances and periods of time. By fall the doe and fawns are nearly always seen together, and most of the family groups remain together until the following fawning season.

Food Habits and Nutritic

Except during the summer months, agricultural crops make up 50 to 60 percent of the whitetail deer diet in Kansas. Woody plants provide 30 to 40 percent of the forage during all seasons of the year. Summer diets are composed of nearly 50 percent forbs, 30 percent woody material, and 10 to 15 percent farm crops. Grasses comprise the smallest portion of the diet.

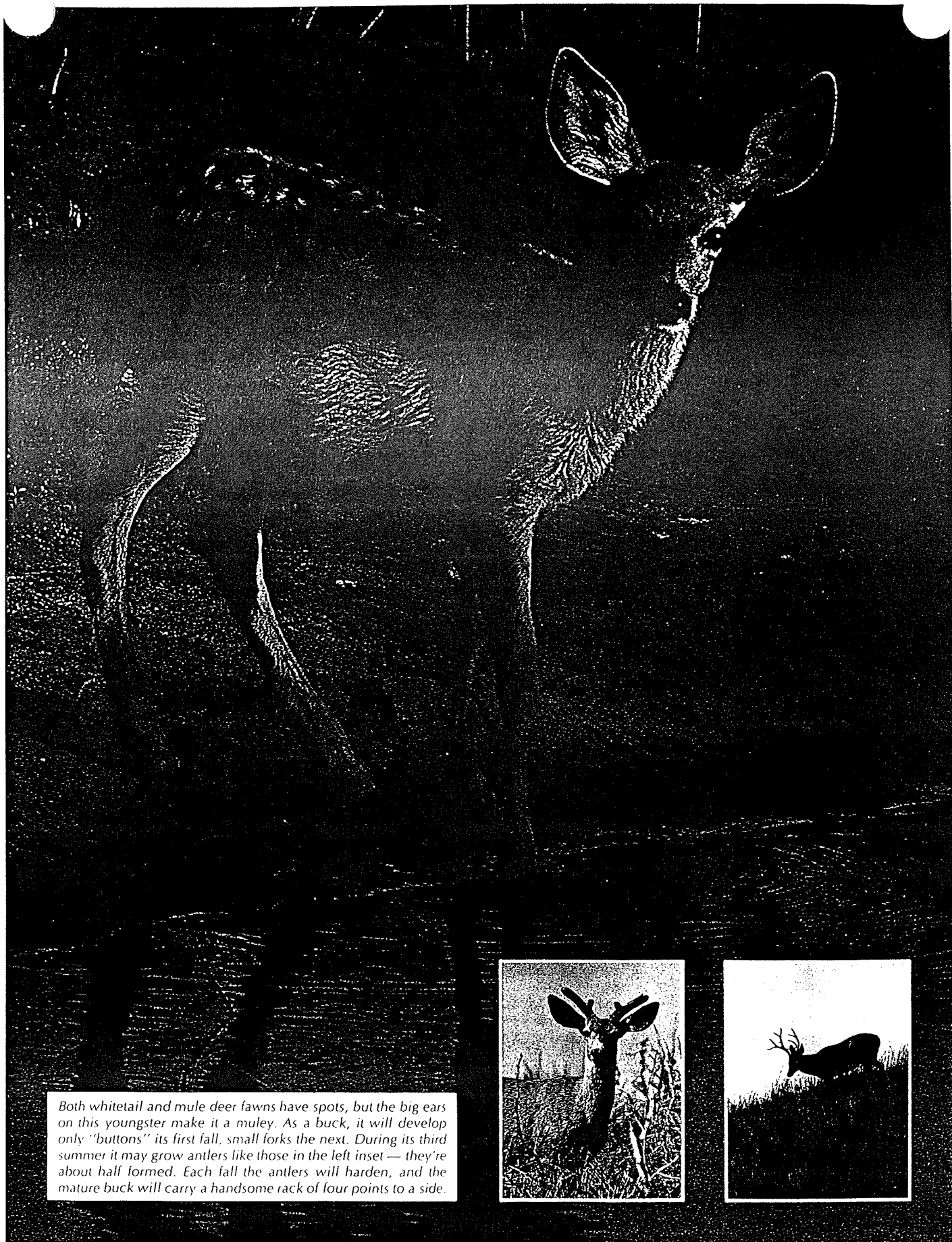
Kansas mule deer have food habits similar to the whitetail, though grasses make up a greater proportion of the mule deer diet. This may reflect the fact that mule deer inhabit the more open grassland areas as opposed to the woody drainages frequented by whitetails. Agricultural crops comprise 40 to 50 percent of the mule deer diet.

The daily forage intake for a deer is about three percent of its live weight. This intake varies with the season of the year. Food intake for mature bucks is greatest during the spring, decreases in summer, and increases again in early fall. Intake for does is greatest in the fall, prior to breeding.

Starvation of deer is not a major concern in Kansas. Starvation is rarely caused by a lack of food; rather it is the result of the available food not providing adequate nutrition and energy to sustain the deer in a healthy condition. In order to maintain good health, a deer's diet must contain the correct balance of proteins, carbohydrates, fats, minerals, and vitamins. The nutrient requirements vary with sex, age, season of the year, and environmental conditions.

The use of agricultural crops by Kansas deer can and does lead to crop damage problems. An increasing deer population generally results in more damage reports. Reducing crop damage is a primary consideration in the management of the Kansas deer herd.

Water is an essential item in the daily diet of deer. The amount needed depends on air temperature, evaporation rates, water content of the food eaten, and the physical activities of the animal. Deer have a daily water requirement of about 1½ quarts per 100 pounds body weight in summer. Deer will eat snow or lick ice if all the free water is frozen. Availability of free water can dictate whether or not favorable cover sites will be used by deer. The absence of drinking water may prevent deer from using what is otherwise prime habitat. Adequate water supplies are available in eastern Kansas in the form of rivers, ponds, lakes, and reservoirs. Water in western Kansas is more limited due to fewer water sources and lower rainfall. The increase in irrigation has provided a water source (flood and sprinkler irriga-



Both whitetail and mule deer fawns have spots, but the big ears on this youngster make it a muley. As a buck, it will develop only "buttons" its first fall, small forks the next. During its third summer it may grow antlers like those in the left inset — they're about half formed. Each fall the antlers will harden, and the mature buck will carry a handsome rack of four points to a side.

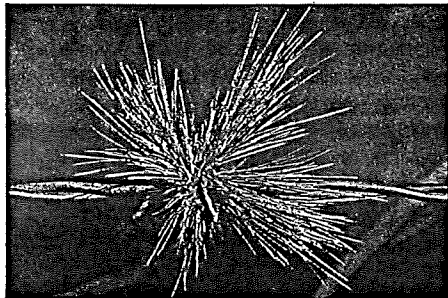


Gene Brehm photos

tion (ailwater pits) in areas where
free was once scarce.

Mortality

Captive female deer may live to be 23 years old, and males 16 years. The life span of a deer in the wild is about half that of a captive animal. Rarely do wild deer reach 12 years of age — whether they are hunted or not. In a hunted population, very few bucks exceed 5½ years, though a good number of does may be 8½ years old.



Gene Brehm photo

Large predators like wolves, cougars, and grizzlies once preyed on Kansas deer. Those predators are now gone, but automobiles, feral dogs, and fences kill in their stead.

The primary causes of deer mortality include legal hunter harvest, poaching, deer-vehicle accidents, predation, diseases, parasites, hunter crippling losses, and fence and farm accidents. In 1984, legal harvest removed nearly 24,000 deer and reported deer-vehicle accidents claimed 3,000 more. The actual number of deer lost to vehicle collisions could be as high as 5,000 annually. The magnitude of loss to poaching is difficult to determine but may approach the legal harvest in some areas of the state.

Deer-vehicle collisions occur most frequently where highways follow or cross woody drainages. "Deer Crossing" signs are placed at locations where there have been five or more deer-vehicle collisions in a one year period.

Predation by coyotes and free-ranging dogs is a primary cause of fawn losses. Predators do serve a useful purpose by removing sick or wounded animals.

Diseases and parasites are minor problems for deer in Kansas. While epizootic hemorrhagic disease (EHD) is the most serious disease affecting whitetail herds in the Midwest, its significance in several minor Kansas die-offs has not been fully documented. The disease can and occasionally does decimate deer herds with amazing swiftness. The EHD virus is spread by a mosquito and has its most pronounced

effects during hot, dry years from late July through October. As deer congregate around water during dry years, they run a greater risk of exposure. EHD has been found infrequently in mule deer and antelope.

The state's veterinarians and farmers are more concerned about deer carrying leptospirosis, anaplasmosis, and brucellosis or "bangs" disease, as these affect cattle herds. Brucellosis testing proved negative on 2,000 blood samples collected during the 1981 firearms deer season. Blood serum analysis from 2,000 deer showed a very low 2.9 percent incidence of leptospirosis and a 1.4 percent occurrence of anaplasmosis. As the deer population increases, it is a good practice to test deer again, periodically. It is unlikely that deer populations in Kansas will ever pose a disease threat to the state's livestock and dairy industry. Population levels will be maintained at a point compatible with agricultural interests.

Habitat

Kansas deer habitat is a constantly changing array of woody, grassland and agricultural vegetative communities whose ability to support deer fluctuates with season, climatic conditions, intensity of land use, cropping patterns and degree of human disturbance. Most whitetail populations are associated with permanent woody vegetation of some sort, what we generally think of as cover.



Gene Brehm photo

Though both mule deer and whitetails are considered as browsing animals, they graze effectively, too, and relish succulent plants like alfalfa.

Cover provides shelter from the elements and escape from predators — a sense of security. The degree of security provided affects the health of deer, and security requirements vary with the pressures placed on individual animals. Cover must moderate temperature and precipitation, provide physical barriers to predators, and reduce vulnerability to

hunters. As such hazards intensify quality and/or quantity of cover, increase or the deer will leave.

Cover can be provided by topographical features such as rock outcrops, gullies and draws, ridges, "go-back" areas grown to forbs and grasses, and even agricultural crops and their residue. Cover becomes less critical as one moves from northern climates into more temperate areas.

Whitetails prefer different cover types than muleys. In the east, whitetails are most abundant along the creeks and rivers where elm, ash, cottonwood, hackberry, willow, oak, and boxelder are common overstory vegetation. Understory vegetation is typically mulberry, sumac, coralberry or buckbrush, dogwood, plum, chokecherry, gooseberry, greenbrier, poison ivy. Grasses and forbs add to the understory diversity necessary to attract deer.

Whitetail fawning sites in alfalfa and clover fields become hazards if the young are trapped there during the mowing operation, so most east-side deer activity during all seasons is in close proximity to secure woody cover. Areas of old field succession provide bedding and fawning sites as well as a diversity of native foods. Field borders of osage orange interspersed with grasses and forbs act as travel lanes. Diversity in plant species and density, as well as canopy coverage, is the key to prime whitetail cover.

Suitable whitetail habitat in western Kansas is limited to creek borders, river bottoms and brushy draws. During the growing season, whitetails here find shelter in corn and milo fields. Even grass fencerows serve as bedding areas for the adaptable whitetails, which are more and more taking up residence in traditional mule deer habitat.

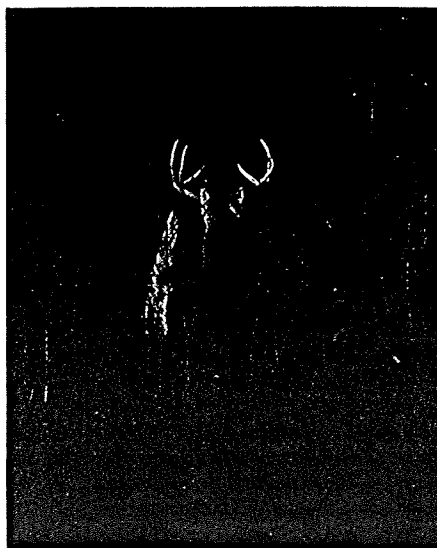
Kansas mule deer frequent the open grasslands and associated croplands of western Kansas. These animals like to be able to see, and they prefer sparse vegetation. Brushy, weedy draws that traverse pastures and croplands are favorite travel lanes and bedding sites. Cottonwood, willow, salt cedar, American elm, hackberry, and green ash are the major tree species associated with mule deer cover. Primary shrub species include rose, plum, golden currant, chokecherry, sumac, snowberry, and sagebrush. Water basins left unfarmed and allowed to grow smartweed, fireweed, ragweed, and sunflowers become islands of cover amidst a sea of agricultural crops. Untilled, ungrazed, brushy draws provide preferred mule deer fawning sites as well as escape cover. Thickets of plum, chokecherry, and sumac are among the most attractive bedding spots for mule deer.

Movement and Home Range

Deer movement in Kansas is influenced by the limited amount of deer habitat in the state and the fact that most of this habitat is thinly spread along watercourses and drainages. Movements are seasonal and dictated partly by the physiological needs of deer and changing habitat conditions. The more a given deer range provides year-round requirements, the less likely it is that migrations will occur. Deer movements peak in April and May and again in October, November, and December. Over 20 percent of the state's roadkills occur in April and May, 40 percent during the second peak in deer activity. Spring movements are related to winter herd break-up and prefawning activity, while the fall shuffle is in response to the rut, hunting pressure, and changing habitat conditions that force deer to move to secure wintering areas.

Following the rut — and particularly after the hunting seasons have ended — deer activity decreases and the animals tend to congregate. Herds begin forming during leaf fall and as crops are harvested. Harvest reduces deer range to a fraction of its summer expanse, as many deer live in standing corn, milo, and wheat. Herding is frequently an environmental requirement because of severe weather and reduced food supplies during the winter. Relatively long movements to wintering areas are not uncommon, particularly among mule deer. During deer season hunting influences deer movements and distribution more than any other factor. After that, food availability and secure winter cover are most important. The relative severity of any given winter strongly influences the size of winter herds and the distance traveled to habitat that meets their needs. In mild winters deer are more widely distributed and do not form large herds until stressed. "Yarding", the concentration of large numbers of whitetails in small wintering areas in northern deer range, does not occur in Kansas.

Migrations of up to 100 miles are not uncommon for mule deer in mountainous habitat. Mule deer found on the prairie don't migrate, but they do travel extensively — particularly the yearlings. This was demonstrated during a recent study conducted in a 12-county area of northwest Kansas. Game biologists and conservation officers caught, tagged, and released 67 mule deer fawns and seven whitetails. Nineteen of the mule deer were later recovered. Deer recovered as fawns remained in the vicinity of their capture site with no straight-line movements over one mile recorded.



Kansas whitetails thrive in a variety of cover types. The buck at top is headed for second-growth timber, having been jumped from a patch of weeds. Tree belts are favorite travel lanes for deer, and many, like the doe at bottom, spend their summers in cornfields!

Those recovered as yearlings moved an average of 46 miles, while adults traveled 84 miles from their tagging location.

Most of the wandering deer struck out across country rather than following a single drainage. In the study, mule deer over one year old crossed an average of 2.8 drainages. A pair of yearling females marked as fawns were recovered at the same time and location after a 68-mile movement. Another set of twin bucks were recovered as yearlings the same year but over 60 miles apart. Nebraska's firearms hunters recovered three of our marked bucks after movements of 37, 65, and 75 miles. The longest straight-line movement for mule deer was 97 miles — though a yearling whitetail doe holds the Kansas record for the longest journey. Tagged as a fawn in Sheridan County, she wandered 170 miles to the Chikaskia River in Kingman County! No significant difference has been found between the wandering tendencies of bucks and does or the distances each will travel.

A deer's home range is defined as the area traveled on an annual basis by a deer in its normal activities of food gathering, mating and fawn-rearing. The size of a home range is determined by the availability of food, water, cover. Home ranges are generally smallest in the summer and largest in the winter. Kansas deer range more widely in the western part of the state than in the east. The average home range is 320 acres but can vary from 100 acres to over 1,000, depending on the proximity of food, water and cover. In western Kansas there may be a seasonal change in home range locations from summer to winter as a result of inadequate food and cover within the summer range to sustain a wintering population. This is particularly true where deer inhabit corn fields throughout the summer and early fall.

MANAGEMENT

Deer management, in its broadest sense, includes five essential components: (1) research programs to provide knowledge and understanding of deer biology, behavior, and ecology; (2) surveys to monitor population and habitat characteristics and trends; (3) information and education to enhance public understanding and support of deer management programs; (4) enforcement of laws and regulations designed to manage deer populations; and (5) management of deer habitat. In

Kansas harvest manipulations and habitat improvement are the most important deer activities.

Harvest Manipulation

With an increasing whitetail population and stabilized mule deer numbers, population control through hunter harvest is a prime concern of managers, administrators, landowners, and sportsmen. Several factors are considered when establishing deer harvest goals.

has been duplicated six times in a 20-year period. Questionnaires are sent to 3,500 landowners randomly selected from ASCS county mailing lists. The most recent survey was done in the winter of 1984-85 and indicated that, from a landowner's perspective, deer numbers were increasing and that landowners would prefer to see a stabilization in population levels.

The number of deer in Kansas at any one time is impossible to know. Since we cannot monitor actual population size, it becomes necessary to obtain information that will show its trend. A

cidents are also used as a population trend indicator. In 1965 there were deer-vehicle accidents reported per one billion miles of vehicle travel; in 1984 there were 424 roadkilled deer per billion vehicle miles. This higher accident rate can be attributed to a productive and adaptable whitetail population that is not only increasing in size, but extending its range.

Because of the diverse nature of Kansas' deer habitat and the spotty distribution of its deer, management units were established to better formulate harvest goals for localized populations. There are now 18 management units plus three military installations. Harvest goals are set for each of these units and permit quotas are recommended that will achieve the desired harvest. Recommendations for season dates and permit quotas are based on population data, landowner and sportsman concerns, and the professional opinions of KF&G personnel. They are presented to the Fish and Game Commissioners for approval at a public meeting. Public comments are there solicited and considered by the Commission.

The issuance of deer hunting permits is currently to Kansas residents only. There is no quota on the number of archery permits that can be issued, but firearms permits are limited. The hunter is entitled to only one deer hunting permit. It can be archery or firearms but not both. Firearms hunters must apply for a permit and must select the management unit in which they wish to hunt. By state law, one-half of all authorized firearms permits must be made available to landowners or tenants who own or rent 80 acres of farm land. All applications are entered on computer and a drawing is held to select those persons who are to receive a firearms permit. Applicants who did not have a firearms permit the previous season are given first consideration in the drawing.

The types of permits issued (i.e. bucks only, any deer, antlerless only) are determined by the population goal. If population stabilization or decrease is desired, it is necessary to harvest does. This requires the issuance of "any deer" and "antlerless only" permits. If a population increase is the goal, then the does need to be protected and "bucks only" permits will comprise the bulk of the permits issued.

Maintenance of the herd at a given level requires that surplus animals be harvested, including females. If an increase is desired, then some surplus should be left for breeding stock. If herd reduction is the goal, then all of the surplus and some of the breeding stock will need to be harvested.

In 1977, the percentage of does in the



Gene Behm photos

Mule deer in western Kansas may find winter pickings a bit lean, but most, like this buck, come through the snow in fine shape. Starvation is never an issue for Kansas whitetails. The doe here is a typical member of the Kansas herd — sleek, alert, and healthy.

They include: (1) landowner tolerance levels for deer and hunters; (2) deer population size; (3) deer species; (4) numbers of trophy bucks; and (5) hunter densities.

Since Kansas is an agricultural state and most of the land is in private ownership, landowner tolerance for deer and crop damage by deer are important considerations in setting harvest and population goals. Field personnel from the Kansas Fish and Game Commission (KF&G) contact farmers and ranchers to determine numbers and severity of deer damage complaints; farm organizations are involved as well, and periodic landowner deer surveys are taken.

The landowner survey is a measure of change in landowner impressions and attitudes toward the deer resource. The survey was first conducted in 1964 and

trend survey measures whether the population is increasing, decreasing, or not changing. The landowner deer survey gives us a measure of population change based on landowner opinion and deer damage complaints. Changes in the number of reported deer-vehicle ac-



il harvest was six, the lowest in 20 years of hunting. In 1984, 37 percent of the whitetail harvest was does, indicative of an attempt to stabilize the whitetail population. On the other hand, an attempt is being made now to increase mule deer numbers by protecting the does. The proportion of does in the 1981-1984 mule deer harvest was only eight percent.

In Kansas, the mule deer presents a harvest management challenge because its behavior makes it more vulnerable to hunters. The mule deer inhabits open grasslands in western Kansas and is a more trusting animal than the whitetail. Until 1979 there was no differentiation in species for harvest goals in the western Kansas deer range. Since the re-opening of deer hunting in 1965, the mule deer was the primary species in the western units and there was no reason to consider harvest goals for individual species. Whitetails comprised less than five percent of the total deer harvest in the western units in those early years.

But by the mid seventies, whitetails made up about 25 percent of the western harvest. The whitetail was expanding its range into traditional mule deer country and increasing resident deer numbers. Permit quotas and harvest goals were subsequently increased, but without species differentiation. The result was that hunting pressure increased on the mule deer rather than being apportioned to both species. In 1979, "whitetail only" permits along with "either species" permits were issued. In an attempt to increase the mule deer population in eight western management units, the mule deer doe is protected by issuing "bucks only, either species" permits; and, in an attempt to stabilize the whitetail population a combination of "any whitetail" and "antlerless only whitetail" permits are being issued. This system has resulted in whitetails comprising 60 to 90 percent of the deer harvest in the traditional mule deer units.

When most Kansas deer hunters go afield, they have a vision of harvesting a "trophy" deer. To most hunters that means an antlered deer having 10 points or more. The present deer management program in Kansas is designed to provide the opportunity for a hunter to harvest a trophy buck if he directs his hunt at achieving that goal. The herd cannot be managed in a way that will place a trophy buck in the sights of every hunter, (at least not without drastically reducing the harvest and the number of hunters). Still the chances for a trophy buck in Kansas are better than in most states and, in fact, may be the best in the nation for big whitetails!

Management of trophy bucks in Kansas means allowing animals to reach 2½ years of age or older. Kansas bucks are not lacking nutritious food, so time is all they need in order to grow sizable antlers. Bucks from 3½ to 7½ years old develop the largest racks. Age data are necessary for monitoring the effects of harvest on a population's age structure. To do this, tooth envelopes are provided each firearms deer hunter and he is requested to submit to KF&G the two primary incisors from the harvested deer. By visual inspection the fawns and 1½ year old deer are sorted from the adults. A sample of the adult incisors are sectioned and microscopically "read" for age. The age is determined by counting the number of growth rings or dental cementum annuli, much like



This fawn is only a few weeks old. If it is a buck, it may live to be four or five, perhaps older if it is very lucky. In a hunted population, does live longer, but rarely exceed nine years of age in the wild.

counting the annual growth rings for the age of a tree.

The mule deer buck age structure for the last 13 years has averaged 70 percent yearlings, 20 percent 2½ year-old deer, and 10 percent mature (3½ years or older) animals. Whitetail bucks for the same time period averaged 60 percent yearlings, 20 percent 2½ years, and 20 percent 3½ years and older. This type of age structure provides a good balance between young deer and trophy-age bucks.

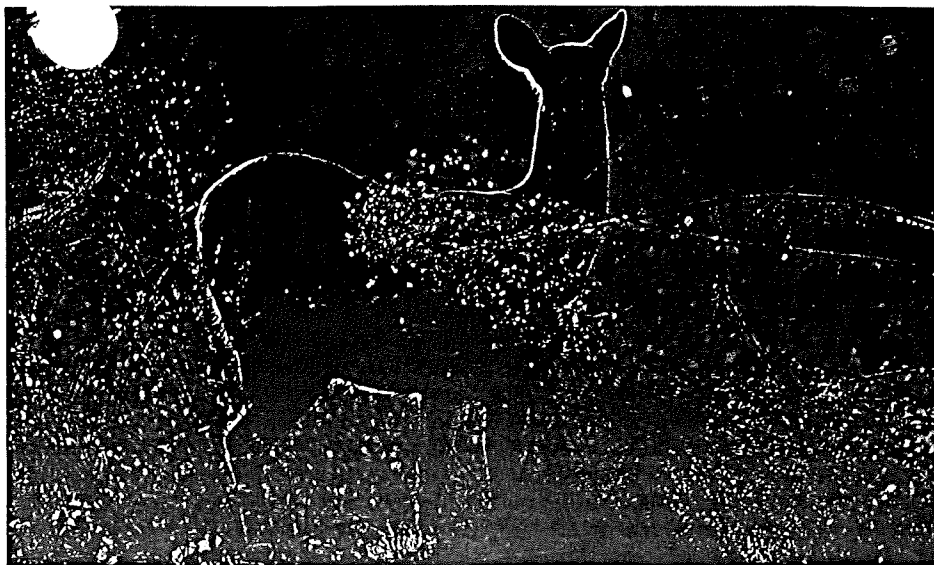
Hunters and non-hunters alike benefit from a healthy deer herd. Last year

deer provided nearly 344,000 man-days of hunting recreation for 42,000 hunters and untold days of enjoyment by the non-deer-hunting public. One third of those questioned in a telephone survey of 500 randomly-selected Kansas citizens said that deer were their favorite wild animal. This underscores the need for total public input when considering deer management programs.

As a consequence of increasing deer numbers, harvest goals, hunter success and hunter numbers have all increased. Numbers of bowhunters have jumped from 1,100 in 1965 to over 15,000 in 1984, and the ranks of firearms hunters have grown from 4,600 in 1965 to 30,600 in 1984. Hunters have also experienced higher and higher success rates over the last 20 years of deer hunting: Archers had 14 percent success in 1965 compared to 31 percent in 1984, while firearms success was 38 percent in 1965, 68 percent in 1984. Harvest and hunter success information is obtained from questionnaires provided each deer hunter.

As the number of permit holders increases, we are satisfying a greater proportion of the Kansas hunters who want to pursue deer. But concurrently there is the potential for a reduction in the quality of each hunting experience. The density of archery hunters has increased from three hunters per 100 square miles in 1966 to 16 in 1984; firearms hunters have increased from 8 per 100 square miles in 1968 to 41 in 1984. These figures are expected to continue upward in coming years. With increasing densities of hunters, the number of potential hunter conflicts also rises.

The definition of a "quality" hunting experience is different for each hunter. For some, a quality hunt depends solely on the environment in which the hunt takes place. For others the kill is of paramount importance. Still others feel quality is related to observing deer, especially antlered bucks. And many hunters just want solitude in the woods. KF&G has a responsibility for controlling the sport of deer hunting and must maintain some standards of "quality" for the deer hunter. Our laws and regulations are not only a tool for managing hunter harvest, but they also establish some baseline for hunter ethics and hunting quality. As hunter numbers and hunting conditions change, laws, regulations, and policies will also change in order to maintain some degree of quality and ethical behavior in the sport of deer hunting. For some, the words quality and ethics are foreign, but if deer hunting as we know it today is to survive into the 21st century, all hunters will need to examine old habits and ideas and be prepared to change them.



Gene Breitm photo

Habitat Improvement

Habitat is defined as those environmental factors a species needs to survive and reproduce in a given area. These factors include food, cover, and water. The numbers and distribution of any animal are limited by the quantity of suitable habitat. Habitat management in Kansas has two basic objectives: (1) to maintain quality habitat in its present state, and (2) to improve habitat where it has deteriorated.

Though Kansas has a great variety of deer habitats, management is directed at two main types — woodland and rangeland. Here are some of the strategies we use in each: Dense stands of mature timber where understory cover is sparse are treated by selective timber harvest or thinning. This removal of trees will open the overstory canopy, allowing sunlight to penetrate and stimulate the growth of understory vegetation (shrubs, forbs, grasses). These clearings will provide the successional stages of vegetation growth so important for deer. A number of well-scattered openings is more desirable than one large opening. The size and distribution of openings is determined by the size and shape of the timber stand to be treated.

Woodland edges are planted to a variety of plant species to maintain diversity and natural succession. Cropfield borders, when planted to woody cover or given over to advanced succession, offer good travel lanes for deer. Non-tillable draws and ravines can also be planted to shrubs, forbs, and grasses. In western Kansas, these areas provide needed mule deer fawning sites.

Grazing of woodlands by livestock is discouraged. Livestock compact the soil and trample, eat, or otherwise destroy

important understory vegetation. Fencing of woodland areas is encouraged. Brushy, ungrazed draws in western Kansas are premium mule deer cover and need to be protected from use by livestock.

Rangeland management for deer includes the establishment of grazing programs that maintain grassland vigor and quality. This benefits livestock and deer. When burning is used, selected areas of brush are protected. Maintenance of brushy draws and ravines as well as grasslands is particularly important for mule deer in western Kansas. Field corners and other waste pockets should be allowed to grow into weedy, brushy sites to create mule deer cover. Such areas include abandoned farmsteads, rainwater basins, and pivot irrigation corners. All can provide fawning sites and winter cover.

In both woodland and rangeland settings, burning is an important tool in maintaining successional stages. Controlled burns are beneficial for all wildlife if done at the right time and in the proper way. Mowing and disking can also be used to establish early successional stages and maintain desired species compositions and densities.

Besides enhancing the stands of natural foods (browse, forbs, and grasses) through woodland and rangeland management, we can plant agricultural crops near deer cover. One- to three-acre food plot plantings of corn or sorghum in an area of winter deer cover will supplement natural foods and draw the animals from great distances. Even crop residues next to wintering areas provide a good source of winter food, if those residues are not fall-plowed.

Though winter blizzards in western Kansas can cause hardship for deer, supplemental feeding under these con-

A lot of hunters don't like to shoot doe careful cropping of females is necessary to maintain proper age and sex ratios in our deer herd. Antlerless quotas are determined for every deer management unit after biologists have assessed the need for doe harvest.

ditions is generally not advisable. The practice of supplementally feeding deer can be expensive and most often is not done until after the deer begin to show signs of malnutrition. If the artificial food differs greatly from that which the deer has been using, the microflora of the stomach are unable to process it. The deer is then likely to die. Winter food sources are beneficial when established before winter weather can create hardship for the deer population.

The key to successful deer management is to create proper habitat — as much edge and interspersed cover types as possible.

HUNTING

Deer in Kansas are managed for a number of reasons. They're pretty animals, and photogenic. People like to see deer, so we all want a few around. On the other hand, not all farmers want to feed deer, and nobody wants to hit deer with their automobile. That means we don't want too many deer. Biologists are also concerned with things like deer distribution, health, and genetics. They want a good deer herd, not just a big one or a little one.

What is a good deer herd? It's many things, but one of its characteristics is that it needs periodic cropping. That means hunting. Letting deer die of old age not only wastes these animals, but their habitat takes a beating in the process, and the herd members suffer genetically if the practice continues. In modern Kansas, there are more things that keep deer alive than there are things that kill deer. So, if the herd is to remain healthy, of good genetic character, and the size we want it to be, it must be trimmed. Management is, after all, wise manipulation of populations. It is not merely protection; nor is it only a reduction of surplus. That we have one of the healthiest herds in the nation says a lot for our management and managers.

It may seem a bit out of character for people who like to see deer and who give a lot of money each year to Kansas' deer management program to get any pleasure from shooting them, but that's what happens each fall. Sportsmen from all over the state save up vacation time

antlers to chase the elusive big-rac buck through timber and over prairie. They do it because they like to hunt and because man evolved a hunting animal. Happily, their sport is in concert with what is best for the deer. And they willingly lay down their weapons when the season is over, knowing that controlled harvest is good, but that overkill is, like full protection, not in the best interests of the herd.

Hunting Methods

Whether you're a beginning Kansas deer hunter or a seasoned woodsman — or perhaps someone who'd just like to know a little more about deer hunting — a review of tools and techniques is in order. Let's start with techniques.

Many Kansas hunters prefer to hunt out of a tree stand, and of the methods legal, this is no doubt the most effective for whitetails. These deer travel established routes at loosely established times. Except for escape trails, such routes are visible even to a casual observer. Waiting alongside one of these trails long enough is sure to reward you with the sight of a deer. Waiting in a tree stand is better than waiting on the ground not because you have a wider field of view but because you are above the wind currents that telegraph your presence to deer.

A tree has to be special to make a good or even serviceable blind. Not only must the tree be within shot range of the trail, but it must afford you some flexibility should the deer appear from right or left, walking or moving fast. You must have clear shot lanes in both directions at several different points and distances. You can't shoot well if you're looking into the sun, so the tree must be to the sun side of the trail at the time you expect the deer to come along. Whether you opt for a platform or simply stake out in a large crotch, the blind must be easily accessible. You don't want to make a lot of commotion when you climb up or down, and since your most productive hunting hours are early and late, you'll be going up or down in the dark. Safety is important, and your blind must be stable. A safety belt is a good idea, too. Another thing you should think about is how high to go. If your feet are ten feet off the ground, you're not only above the deer's normal line of vision, but are high enough that the animal is unlikely to smell you. Thermal winds may drag your scent down, and if you don't take normal precautions to minimize your odor your scent pool may still be detectable; but remember, the less severe the shot angle, the less likely you are to miss — especially with a bow!

Deer like cover. Whitetails will travel through heavy brush or timber before they'll venture into the open, especially during the daytime. They may feed in crop fields at night, but you won't see them there during hunting hours. You can tell the purpose of deer trails by studying them. If you find a path that's heavily used, with all tracks going from heavy cover to more open areas, it is likely to be a feeding trail, used at dusk by deer moving from their beds to forage. If the tracks lead from the fields to cover, your best bet on that trail would be in the morning as the deer move to bed. Escape trails are not so plainly marked, but they play an important role. Rarely is a deer far from security cover, and it knows instantly how to get there. Escape trails aren't good ones to watch unless you're hunting a very crowded area where other hunters may push deer to you along such routes.

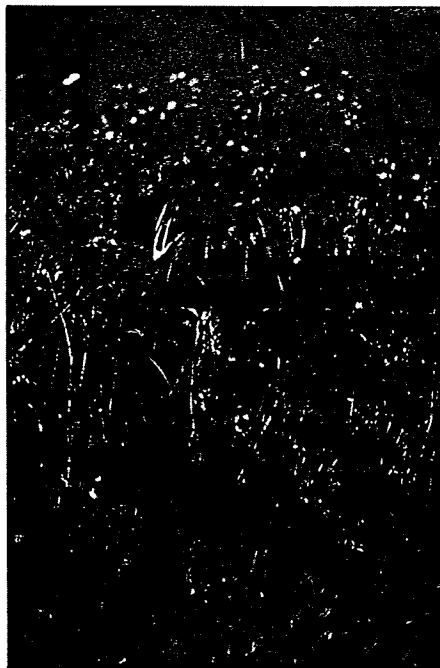
You hear a lot about scrapes nowadays, though deer have been making scrapes for years. A scrape is a dished area in the earth where a rutting buck has marked his territory. One buck may make several scrapes in an area. Commonly they are around the perimeter of and just inside a woodlot or shelterbelt. Most of the time they are on trails or near trails. Scrapes are made just prior to and during the rut, though they may remain visible long after. A rutting buck will visit his scrape periodically and work it. Usually this involves urinating in it, pawing it up, and perhaps raking

overhead branches with his antlers. Most all scrapes are located under branches, and the buck will hook his antlers in these twigs, twisting them this way and that. He'll get up on his hind legs to reach them, if need be. Often he'll rub the tip of a branch with the front of his eye, where his preorbital gland is located. This is thought to be an act of territoriality. Most scrapes also show one clear hoofprint of the buck that visited them. This hoofprint can be a great help to you, as it gives you an idea of the body size of the local buck. If you're hunting for a big set of antlers, it pays to look for big tracks — albeit there is not always a direct correlation.

The last half of November is the normal rutting season for both mule deer and whitetails in Kansas, though the peak varies with locality. While mule deer are not territorial and do not make scrapes, they go through the same physiological and psychological changes whitetails do. That is, their necks get big and they become more active, eating less and traveling more — especially during the day. They're not as cautious in the rut, either, and because Kansas' firearms deer season falls at the end of this period, a lot of big bucks are taken that would escape hunters during other times of the year. Hunting the rut is exciting because you see a lot of deer. More specifically, you see many more bucks than at other times. Whether you are after antlers or not, watching those heavy-racked males chase the does or work their scrapes or just trot down the trail a few feet from your blind is great fun.

Whether you hunt scrapes or trails, scouting is an important part of your efforts afield. If you want to see deer, you must know enough about their habits to predict where they'll be and station yourself there. It does no good to walk through the woods on opening day, hoping to find a well-used trail or fresh scrape. You won't know anything about the deer using the area or when they are likely to pass by your stand. The most successful hunters spend many days afield before they pick up their weapons. It makes them more familiar with their hunting territory as well as with the local animals. They get to know the deer individually and can tell if there's a big buck in the area. Scouting helps them make the most of their time during the hunting season, when time is at a premium.

Stand hunting is not the only way to hunt deer. In fact, it may not be the best way to hunt mule deer in Kansas. Stand hunting is effective on whitetails because they are habitual in their travels and generally frequent small areas. One or two sections of good cover is plenty of



Gene Brehm photo

Deer are not as tall as most people think, the average height being only about three feet at the shoulder. You'll see more deer if you look low.



territory for whitetails. Mule deer, on the other hand, range more widely and are less apt to stick to well-defined trails. They prefer more open country than whitetails, too, though in heavily-hunted areas they are learning the value of dense cover.

One of the most rewarding ways to hunt mule deer, and a challenging approach to whitetails, is still hunting. Still hunting is *not* remaining still. That's stand hunting. Still hunting is moving very slowly and quietly through

cover, hoping to spot a deer browsing or even bedded. Because these animals are so well camouflaged themselves, and because their senses are so keen, the odds are stacked against you when you still hunt. Many times you'll pass by deer that elect to stay hidden rather than bolt into the open, or you'll spook your quarry so far ahead that all you'll see is a white tail or rump patch. Still hunting is sneaking, and you must be very good at it if you expect to get close to a deer without giving yourself away.

Hunting season is a hazardous time for bucks like this, though more often than not they're able to elude the red-clad rifleman. Deer hunting can be a challenging sport and is a necessary part of Kansas deer management

Another deer hunting method Kansans use is driving. Driving is best done with a sizable but not unwieldy group of sportsmen who agree to hunt cooperatively in an area. Half a dozen hunters can effectively drive a small woodlot or shelterbelt. It's best if all have at least a

ru... tary knowledge of the area and ess... al that one be given the job of organizing the drive. Most drives are made by half the hunters involved, while the other half act as standers, posted on the edges and far end of the cover to be driven. The best drivers hunt as if they were still hunting: slowly and quietly. Noisy drives not only ruin the atmosphere of the hunt but alert deer far in advance of the drivers that something is amiss. These deer will likely hold tight, pinpointing the exact location of each driver as he moves. Many deer slip between drivers and end up behind the line without anyone knowing about it. They can do this more easily if the drivers are making noise. A quiet drive is much more effective, as each driver is actually hunting, not just bulling through cover. Not only do the drivers have a better chance of seeing deer, but the standers are rewarded with deer that can't tolerate the suspense in the thick stuff and try to leave. All drives should be conducted in a crosswind if possible, for the benefit of both groups of hunters. If the country dictates that a drive be made parallel with prevailing breezes, the standers should always be placed downwind. Driving is an excellent way to get at deer in their bedding sites, where still hunting is often futile and stand hunting impractical.

Spotting a deer is only part of the hunt. To kill your quarry quickly and humanely you must make a good shot. That means placing your first arrow, ball, slug, or bullet in the proper place — right behind the shoulder and about a third of the way up from the lower chest line. A hit here will destroy little meat, as your projectile penetrates the rib cage to the center of the lungs. The lungs, besides being vital organs, are large ones, and much easier to locate than heart or brain. A head shot will spoil a trophy, and bullets directed to spine or shoulder will ruin much meat. Always shoot for the lungs, and try very hard to make the first shot good. Wait, if you must, for the animal to come closer or present a better target angle. Don't shoot at running deer until you've practiced considerably on moving targets. Adhere to reasonable range limitations. By making every shot a lethal one you'll not only improve your success in the woods, but you'll help reduce crippling losses that rob everyone.

After you shoot, watch that deer and prepare to shoot again. If the animal is far away, you may not see a reaction; if close the recoil may hide it. Running deer often show no response to a bullet strike. Hits can be audible but are not always, and seldom will you see hair fly. Don't expect the deer to go down at the shot unless you destroy brain, spine, or

major bones. A good hit, a one-shot kill, is not necessarily an instantaneous knockout. There is no way to predict exactly what effect your shot will have, so it's best to call your shot as well as you can, shoot again if the deer gives you another chance, and check the target site for hair, even if you think you missed. Many fine animals are left in the woods by careless and ignorant shooters who failed to check after they pulled the trigger. *Always* check.

A footnote on hunting methods: It's good to think, once in a while, about why you want to hunt deer. If it's just to gather meat or to tag a big local buck before someone else does, you may try the most effective legal means you can. But you're missing something if you do. There's a lot of sport and adventure in deer hunting if you do it right. Voluntarily making things tough on yourself can put spice into what some still consider just an exercise in killing. Regardless of hunting motive, the deer benefit from controlled harvest, and biologically it matters not to the herd that you shoot your deer in an alfalfa field from the seat of a pickup. Nor do the deer care if you pull all stops to take the biggest local rack so you can brag to the unlightened that you are the best hunter in the county. But the institution of sport hunting is imperiled today, and it isn't because we've lost biological justification for harvest. It may simply be that too many hunters have lost the mystique of the chase.

Hunting Weapons

The centerfire rifle is the tool most of us think of when we think of deer hunting. But in Kansas it's also legal to use a bow and arrow, muzzleloading rifle, shotgun, and handgun. Here are some of the requisites of each.



bow and arrow: Archery equipment has undergone great change in recent years, and the most sophisticated bow today is hardly what you would call a primitive weapon. Nonetheless, all bows still depend on flexible limbs for

storing energy and a simple strike impart that energy to the arrow. An arrow still kills the way it did hundreds of years ago — by hemorrhage — and it is still a short-range missile.

Kansas law requires that all bows used for big game hunting draw at least 45 pounds. Whether you prefer a longbow, recurve, or compound, this weight is ample for deer hunting. What's most important is that you shoot your bow well and keep keen edges on your broadheads. To shoot well you needn't be able to skewer airborne oranges at 90 paces; just make sure you can keep all your arrows in a pie-size target at any range you'd consider shooting a deer. Many archers can shoot that well at very long range — 60 yards or even more. For most of us, though, the effective range of our arrows is closer to 30 steps. And even bowmen who can group arrows tightly at extended yardage would do well to take their shots as close as possible. The rainbow trajectory of an arrow makes accurate range estimation a must beyond 30 yards (a deer standing at 50 will be missed completely if an archer holds for 40), and the long flight time of an arrow allows the deer to move partly or completely out of the way after a shot. At close range the arrow remains an effective weapon. As long as you can estimate range well and do not shoot farther than you can be sure of a lethal hit, you will kill deer humanely.

It's important that you practice shooting a lot before the season. Use animal-face targets at unmarked distances so you'll be able to judge range and pick an aiming point automatically in the woods. Shoot uphill and down. Shoot from a tree if you'll be hunting from one. Shoot from *that* tree several times so you have a feel for the stand and know how far it is to points around it. Make sure, when you do this, that your shot lanes are clear, not only at sight-line, but along the path of your arrow's trajectory.

Keen broadheads are killing instruments. An arrow delivers very little impact shock and destroys no tissue around the wound channel of the head. The broadhead kills by cutting blood vessels and vital organs, quickly draining the deer of life. The edges — especially the rear edges — of the broadhead must be as sharp as razors to prevent elastic tissues and vessels from sliding over them. Sharp, a broadhead is a lethal, humane hunting weapon. There is no place for a dull head afield.

Because an arrow delivers no knockout blow on impact, a deer won't always react to a hit. If it does, it may bolt, then stop and look back. Or it may simply walk away. There is no characteristic reaction to an arrow hit. When you release an arrow, assume you hit your deer



... how Kansas deer stack up:

Not only is Kansas hunter success among the highest in the nation, our management programs produce some truly outstanding bucks. Here are the top three deer in four categories recognized by the Boone and Crockett Club, and the number one B&C listing for each.

whitetail deer, typical

world record shot by
James Jordan, Burnett County
Wisconsin in 1914,
score — 206 $\frac{1}{8}$

top three Kansas deer:

Dennis Finger's 1974 buck,
Nemaha County — 200 $\frac{7}{8}$
Michael Young's 1973 buck,
Chautauqua County — 194
Milton Wellbrock's 1968 buck,
Russell County — 189

mule deer, typical

world record shot by
Doug Burris, Dolores
County Colorado, in 1972,
score — 225 $\frac{6}{8}$

top three Kansas deer:

Fred Gilbert's 1966 buck,
Rawlins County — 184 $\frac{2}{8}$
Glenn Meyers' 1984 buck,
Kearny County — 182 $\frac{7}{8}$
Stan Smith's 1981 buck,
Finney County — 181 $\frac{3}{8}$

whitetail deer, nontypical

world record found dead
in St. Louis County
Missouri in 1981,
score — 333 $\frac{7}{8}$

top three Kansas deer:

John Band's 1965 buck,
Republic County — 258 $\frac{6}{8}$
Theron Wilson's 1974 buck,
Mitchell County — 251 $\frac{1}{8}$
Clifford Pickell's 1968 buck,
Greenwood County — 249 $\frac{6}{8}$

mule deer, nontypical

world record shot by
Ed Broder, Chip Lake
Alberta, in 1926,
score — 355 $\frac{2}{8}$

top three Kansas deer:

Lee Ordle's 1966 buck,
Rooks County — 260 $\frac{6}{8}$
Thad Douthit's 1965 buck,
Cheyenne County — 239 $\frac{7}{8}$
Herman Lang's 1969 buck,
Finney County — 229 $\frac{7}{8}$

un! You are sure the shaft went wild. Don't move. The deer probably won't know where the shot came from and will not know what is wrong. Even a fatal arrow wound is not initially painful, and if your shot was in the lungs, where it should have been, the deer will not go far. If you approach, though, your quarry may forget about the arrow entirely and flee from you, covering a lot of ground in short order and making your tracking job that much more difficult. As a rule, it's best to wait an hour before trailing an arrow-hit deer, unless you've seen it go down.



Cene Brehm photo

muzzleloading rifles: Black powder shooters are allotted a certain number of rifle deer tags in Kansas and need not compete with centerfire riflemen in the drawing. That's been a good arrangement for the front-stuffers, and taking big game with primitive rifles is growing in popularity. The minimum legal caliber for black powder deer hunters in Kansas is 40. Probably the most popular bore size is .50. These and larger muzzleloaders are capable of taking deer cleanly with either patched round ball or conical bullet. Both flint and percussion guns may be used in Kansas, and the lock need not be exposed. Optical sights are permitted; so is Pyrodex as a propellant. Though Kansas muzzleloading regulations are quite liberal, many black powder shooters shun Pyrodex and conical bullets. Hardly anyone uses a scope. Shooting a muzzleloader, after all, is reliving the experience of early hunters. Authenticity adds to the fun.

A muzzleloader is fun to hunt with. It makes you concentrate on that first shot, because it is the only shot you'll have. Though front-loading rifles are quite capable of killing deer at ranges over 100 yards, accuracy and sight limitations restrict effective range to under that. The sluggish flight of the ball or bullet makes proper lead extremely critical on running deer, and the slow lock time of black powder arms mandates a smooth, uninterrupted swing. It's always best to rest a muzzleloader because the tremors in your arm have plenty of time to destroy the shot *after* you pull the trigger.



Wayne van Zwoll photo

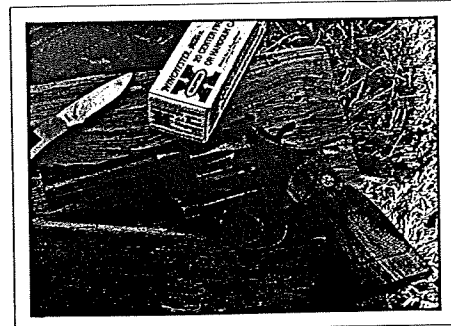
shotguns: Slugs 20 gauge and larger are the only smoothbore projectiles legal for Kansas deer; buckshot is not allowed. Because shotguns are short-range weapons and slugs don't travel nearly so far as rifle bullets, they are favored for deer hunting in heavily populated areas.

A lot of people look down their noses at shotguns, but they shouldn't. Shotguns have a lot going for them at close range. The slug is a big, heavy thing that doesn't need to expand to get the job done. Pump and autoloading shotguns are not only fast to operate but are also among the most used sporting arms in the state. The fellow who hunts deer with a shotgun probably also uses the same thing to kill pheasants and harass the local quail population. He may hunt rabbits and squirrels with it, or prairie chickens and waterfowl. He probably shoots it at a few clay birds each year, too. In short, he is familiar with it. A lot of deer rifles in Kansas don't get any use outside the first week in December.

If you own a shotgun and want to hunt deer with it, there are a few things you should keep in mind. First, a double — whether over-under or side-by-side — will probably not shoot well for you. It will likely throw slugs from each tube to different points of impact. Much better is a pump or autoloader, preferably with an open choke. A tight choke will not be harmed by the passage of slugs, as the soft lead will swage down easily. But the swaging stresses the slug and may deform it unevenly, resulting in wider groups. Almost all shotgun bores are larger than the diameter of the slug. A tighter fit would help accuracy, but thin shotgun barrels couldn't stand the pressure generated by swaging immediately in front of the chamber. Incidentally, the accuracy of rifled slugs is due to their nose-heavy design. Some spinning of the slug does occur as air is forced through the grooves in its sides, but this is not enough to cause a great deal of rotation with most slugs and is not thought to contribute significantly to accuracy. Slugs out of a pump or autoloading shotgun should group in six inches at 75 yards, and a few will do that

at 100. Changing barrels will often prove accuracy, and if you're serious about hunting deer with a smoothbore, you would do well to invest in a short, cylinder-bored barrel.

Sighting a shotgun is different than sighting a rifle. Your eye must act as the rear sight on the shotgun, and most shotguns will shoot high with slugs if you hold them the way you do when shooting at birds. It's often necessary to almost bury the bead in the receiver top to get the slug to print to point of aim. Shotguns for deer hunting are best equipped either with open sights on a slug barrel or with a ramp front and rifle receiver sight combination. Either will markedly boost your effectiveness in the woods. A low-power scope is best of all, and mounts are available to fit most repeating shotguns.



Wayne van Zwoll photo

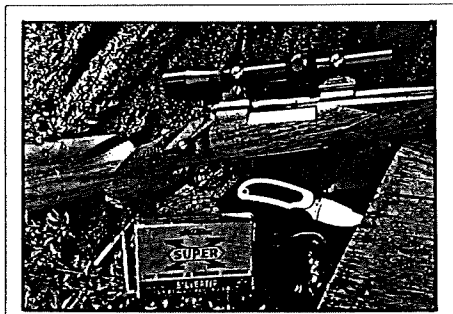
handguns: Pistols and revolvers are the most recent legal deer weapons in Kansas. There are no barrel length or ballistic stipulations, but the cartridge case must be at least 1.28 inches long and the bullet greater than .23 inches in diameter. The .30 carbine round is *not* permitted. As with rifles, only expanding bullets may be used.

Until the sport of metallic silhouette shooting entered the U.S., handguns were considered defensive weapons by most folks. The .357 Magnum had come along in 1935 and the .44 Magnum eleven years later and both had been used to take big game. Still, the development of really potent guns and loads didn't start until silhouette enthusiasts went to work. Now special break-action and bolt-action single-shot pistols are chambered for rounds as powerful as the .308 Winchester. Revolvers like the .454 Casull deliver more muzzle energy than was once thought possible out of a wheel gun. Many handgun cartridges are effective well beyond the yardages at which even practiced handgunners can hit.

Because traditional handgun cartridges like the .357, .41, and .44 Magnums are low-velocity rounds, bullet expansion is not as violent or reliable as with the faster-stepping rifle cartridges.

So expansion of pistol bullets is desirable, of course, even if those slugs are nearly half an inch in diameter to begin with. Hollow-points with large nose cavities generally give the best upset, albeit ballistic coefficient suffers in bullets of this design. If you're using one of the traditional handgun rounds, you won't go wrong to choose jacketed hollow-point bullets of medium weight. By far the best choice is a rifle cartridge or rifle cartridge derivative in a single-shot pistol. Soft-point bullet performance at handgun ranges will be adequate, and the flatter trajectory will make long-range hits easier.

At one time, adjustable sights were a luxury feature on a handgun. Now not only are all the better open sights adjustable, but receiver sights are available and scopes are becoming more popular. Whatever sights you choose, you'll find it easier to steady them with a firm two-hand hold, preferably over a rest. You might even buy a sling and loop it over your head or forearm — anything to deaden those wobbles! Modern handguns are very accurate, and the cartridges more than a match for deer, but you must be able to bridle that accuracy and direct that power to a vital spot on your target.



Wayne van Zwoll photo

rifles: Kansas law requires that rifles used for big game be a minimum 23 caliber; that's all. So you have a lot of rifles to choose from. The best rifles, though, have some pretty specific things in common. First, they are accurate. No matter what the chambering, your rifle should be able to shoot tight groups — a minute and a half is fine. If your gun won't shoot that well, you're compromising your ability to make long shots. Even if you don't *plan* on taking long shots, you may be tempted when a buck with caribou antlers steps out of a distant shelterbelt. Better to be prepared.

The second requirement of any deer rifle is that it be sighted in — by you. You must know where the point of impact is in relation to point of aim for any distance you'd consider shooting at a deer. If you don't, rifle accuracy is of

no consequence and ballistic performance is wasted. Thirdly, the rifle must have a crisp, predictable trigger, one that will let you squeeze off carefully aimed shots without disturbing sight alignment. It needn't be particularly light, just crisp and consistent. Fourth, the rifle must have a good set of iron sights or a high-quality scope. A receiver sight is much better than an open rear blade because of the greater sight radius it affords and because more precise aim can be taken when your eye doesn't have to focus on front and rear sight both. A low-power scope is best of all.

Good deer cartridges are so plentiful now that there are almost too many of them. The .30-30, once the standard for these animals, is no longer high on the list. Many other rounds are more effective — especially in Kansas, where a long open shot is certainly a possibility. Actually, all the cartridges developed before the turn of the century have been eclipsed by racier numbers. Not that newer is always better. The .30-06 is still one of the best deer rounds ever developed, and the .300 Savage remains a fine cartridge for fans of that company's 99 rifle. The 7×57 Mauser and .257 Roberts have made recent comebacks as light-recoiling but accurate and adequate deer calibers.

Among the best cartridges for Kansas hunting, where long and short shots both may be taken, are the .243 Win., 6mm Rem., .250 Sav., .257 Roberts, .25-06 Rem., 6.5 Rem. Magnum, .270 Win., 7×57 Mauser, .280 Rem., .284 Win., .300 Sav., .308 Win., and .30-06 Springfield. Most belted magnums are unnecessarily powerful, though the 7mm Rem., and .300 Win. Magnums have reputations as all-around big-game cartridges. The Weatherby .240, .257, .270, 7mm, and .300 rounds are also superb long-range performers, as is the .300 H&H. Winchester's old .348 is a fine cartridge for the woods but lacking at long range. The same goes for the similar .358 Win. and .350 Rem. Magnum rounds. New offerings, like the .307 and .356 Win. are springing up everywhere. But with current powders and bullets, any newcomer is bound to nearly duplicate an excellent deer cartridge already on the market. Most remain only because their case design adapts them to a specific rifle. Anyway, the most important thing about a deer cartridge is not its headstamp, but its bullet.

Good deer bullets are ballistically efficient; that is, they have a good form factor, a sleek, streamlined appearance. Round-nose bullets give somewhat more reliable expansion and deeper penetration at close range, but those qualities aren't needed on light animals

like deer — at least not in the grooved cartridges just listed. More important is the ability of that slug to shoot flat over long distances and accurately at any distance, so you can thread it through brush or between trees. No bullet, no matter how masculine it looks, is made to shoot *through* brush.

After you've decided on a slippery spitzer shape for your bullet, try several weights in your rifle, and several makes. Perhaps one will shoot much better than the others, and that's the one you should choose. If you stay in the middle of the weight range for the caliber, you won't go far wrong. The 150- and 165-grain bullets in 30 caliber, for example, are both fine choices, as is the 130-grain in the .270, the 140 in the 7mm. Because 24- and 25-caliber rifles are intended for varmints as well as big game, it's best to lean to the heavy end in bullet weight: 117 for the .25, say, and 100 for the .24 — depending on how fast you can or want to push your bullets.

Just about any reputable jacketed soft-point on the market will make a good deer bullet. Those that open fast will be too fragile if you hit your deer close with a lot of speed, and those that are more strongly constructed may hold together a little too well at long range if they aren't pushed fast. Your expected shot circumstances will determine what bullet is best for you. Accuracy remains a critical element.

Deer hunting is among the most fascinating of outdoor pursuits. It is a demanding sport, one that tests both your mental and physical preparedness. It is good for the Kansas deer herd, too, and is an integral part of modern deer management. If you haven't yet taken the dawn trail of a big Kansas buck, perhaps it's time you did. If you're an old hand, you're probably already scouting and practicing on the target range. Whether this will be your first season or your twentieth, good luck, friend. May your shot be true and your steaks tender. □



Gene Brehm photo

STATE OF KANSAS



Joan Finney
Governor

DEPARTMENT OF WILDLIFE & PARKS

James Holderman, Chairman
Commissioner
1021 Denker
Wichita, KS 67216-1202
(316) 267-5008

Theodore D. Ensley
Secretary

February 2, 1993

Senator Don Sallee, Chairman
Senate Energy and Natural Resources Committee
Room 128-S
State Capitol

Dear Senator Sallee:

The subject of nonresident deer hunting was considered during the October, 1992 meeting of the Kansas Wildlife and Parks Commission. The Commission unanimously went on record at that time endorsing nonresident deer hunting and urged that the issue be brought before the 1993 Legislature. In view of that position and on behalf of the Kansas Wildlife and Parks Commission, I would like to convey to you and the Senate Energy and Natural Resources Committee our strong support for S.B. 20.

Nonresident deer hunting has come before the Commission on numerous occasions, both as unsolicited public input and in response to announced Commission meeting agenda items. The majority of public comments received during these Commission meetings have been supportive of allowing limited nonresident deer hunting in Kansas. The Department and the Commission have considered that input in preparing the proposed amendments to current statute as contained in S.B. 20.

S.B. 20 provides general parameters and safeguards under which a nonresident deer hunting program would be developed. It properly places responsibility on the Commission and the Department to carry out the program and provides reasonable flexibility for implementation.

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 3

An in-depth statement of the Commission position on nonresident deer hunting and S.B. 20 will be provided by Commissioner Bill Anderson during the February 2, 1993 hearing on S.B. 20. The Commission strongly encourages the support of and favorable action on S.B. 20 by the Senate Energy and Natural Resources Committee.

Thank you,



Jim Holderman, Chairman
Wildlife and Parks Commission

xc: Sen. E&NR Committee Members
KDWP Commissioners
Sec. Ted Ensley



DEPARTMENT OF WILDLIFE & PARKS
900 Jackson St., Suite 502
Topeka, Kansas 66612-1220
(913) 296-2281
FAX (913) 296-6953
Equal Opportunity Employer

William A. Anderson, J.
Commissioner
5733 Reinhardt Drive
Fairway, KS 66205-3324
(913) 362-3648

DATE: FEBRUARY 3, 1993

TO: SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES

**FROM: WILLIAM A. ANDERSON, JR.
COMMISSIONER, KANSAS DEPT. OF WILDLIFE AND PARKS**

RE: SENATE BILL 20, NON-RESIDENT DEER HUNTING

I appreciate the opportunity to appear before you and encourage your positive action on Senate Bill 20. I have had the pleasure of serving on the Wildlife and Parks Commission since its inception in July of 1987. Non-resident deer hunting has been a topic of concern and debate since the department was created.

The bill before you represents a reasonable compromise allowing limited non-resident deer hunting in Kansas. This is a pro-hunting initiative, one that does not jeopardize the quality hunting opportunity now available to Kansas residents nor the Kansans who choose to hunt out of state.

As you know, from earlier presentations, Kansas deer management is an intense activity including biological, social, and economical factors. This proposal would allow limited non-resident hunting in management units that have historically allowed for multiple permits for Kansas hunters.

In 1965 when we began modern deer hunting in Kansas, 1,220 permits were issued and 164 deer were harvested. This represented a very limited sporting opportunity for Kansas hunters. In 1991, the year for which we have the most recent data, there were over 75,000 permits issued and over 42,000 deer were harvested. Many Kansans were afforded the opportunity to harvest multiple deer. The proposals in Senate Bill 20 will not jeopardize the current system for Kansas general residents and land owners to obtain permits.

KANSAS OUTDOORS "America's Best Kept Secret"

*Senate Energy & Nat'l Resources
February 3, 1993
Attachment 4*

(Page 2)

It has been suggested that non-resident permits should not be allowed until each resident hunter can obtain a permit of his preference. Frankly, this notion is an impossibility, and will never occur under the present form of deer management. I would broaden my statement to say that you will find that all states that manage deer cannot assure each sportsman the deer permit of his preference each year. As a specific example, the demand in Western Kansas for mule deer permits far exceeds the supply. Kansas deer management is dependent on landowner tolerances, and while it appears the deer herd population is generally within landowner acceptable levels, it is unlikely that the numbers can be increased to the point where we can annually meet the demand for mule deer permits in Western Kansas. This situation makes it highly unlikely that non-residents will be granted the opportunity for firearms hunting in Western Kansas. However, in South-Central and Eastern Kansas firearms permits are often available after the drawing and many Kansans obtain multiple permits.

We urge your positive action on Senate Bill 20, because it is a thought out, biologically and socially sound plan allowing limited non-resident opportunities in Kansas. It is important that the state, through the Dept. of Wildlife and Parks, maintain total control over the management of this resource, and at the same time, is allowed to fairly and equitably allow a small number of non-residents to participate in deer hunting. Although the non-resident numbers will be limited, they do represent an extremely positive economic force in those rural areas of Kansas that can accommodate additional deer hunting activity. The non-residents will bring in new dollars, not only to the department, but to the new guides and outfitters businesses in Kansas and to the many enterprises that benefit from hunting activity: motels, restaurants, service stations, sporting goods stores, etc. Former Kansans will be allowed the opportunity to come back and hunt with family and friends. Some of you may remember in 1987, the legislature authorized non-resident turkey hunting. In spite of concern and opposition at the time, non-resident turkey hunting, in no way, adversely impacts resident hunting.

In conclusion, I can assure that the Wildlife and Parks Commission unanimously and enthusiastically supports this legislative proposal, and having recently attended a number of the public meetings held to discuss the non-resident deer issue, I believe that landowners and sportsmen, in general, accept the proposal for limited non-resident deer hunting.

KANSAS
Hillsboro Star Journal

What if other states do like Kansas?

Welcome 1993. Most of us are looking forward to the new year, anticipating some great outdoor activities. It's going to cost a little more. (So what else is new?) Licenses have increased in price, (including lifetime, \$240 each), as well as boat registration and camping permits.

Other changes could include permitting non-residents to hunt deer in Kansas. Touchy subject, especially when talking to ardent deer hunters against such a move. Seems some are afraid of losing their favorite hunting grounds to the rich outsiders or worried that not enough are available to go around for the Kansans. Most are the same folks that go to Wyoming and Colorado each year to hunt elk and antelope. Kind of different when the shoe is on the other foot, huh?

Did you know, Iowa won't allow Kansans to hunt their big game just because we don't allow them to hunt ours? Not hard to reason with that. Some of the other states are keenly looking at that law with the thought of doing the same thing.

One thing for sure, if the Kansas law is implemented, only the serious deer hunters will be invading our treasured lands, at \$200 per license. That amount of money would deter most hunters. Until last year, Texas turkey license for out-of-staters was \$200. Much as I wanted to hunt Texas turkey, it wasn't affordable. Last year, they changed the fee to \$75...I went.

Non-residents could spend \$500 or more for a trophy buck all expenses considered. Most of us would benefit from the additional income. If they hunt for the trophy, most probably the animal will be a six or seven-year-old (prime whit tail) and depending on the severity



of the weather, they won't live much longer anyway.

No doubt as long as there are deer hunters, there will be arguments for and against the non-resident. Kansas is the only state that doesn't allow non-residents to hunt deer. However, the hand writing is on the wall. If we continue to bicker and argue, the federal government is going to cut us off of the much needed and much utilized federal funds. Think about that.

For what it's worth, I say we should share. For several reasons. First, I personally know of hunters in the central Kansas area that reap six or seven deer each year, not counting a few more other members of the family are entitled to reap. Doesn't seem too much to ask if they couldn't get along with one less so a non-resident could bag a trophy.

However, the main reason is because I hunt and fish in several states every year. I have always been welcomed with open arms, met lots of nice folks and have shared their fish and game, as well as their friendship. I really feel guilty when one of them asks, "When is Kansas going to let us hunt some of those big bucks?" I sure would hate it if those same states refused to allow me to enjoy their generosity.

Keep a tight line.



PUBLIC POLICY STATEMENT

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

RE: S.B. 20 - Big Game Permits ... amending non-resident deer permit provisions

February 3, 1993
Topeka, Kansas

Presented by:
Bill Fuller, Assistant Director
Public Affairs Division
Kansas Farm Bureau

Chairman Sallee and Members of the Committee:

My name is Bill Fuller. I am the Assistant Director of the Public Affairs Division for Kansas Farm Bureau.

Discussions of hunting regulations create spirited and prolonged debates at Farm Bureau Policy Meetings. Many farmers have become extremely frustrated with wildlife damage to their crops and property.

In 1991, Kansas Farm Bureau conducted an Animal Damage Survey. Farmers and ranchers told us that:

1. 81% experienced wildlife damage;
2. 60% estimated annual damages between \$100 and \$1,000 ... 30% said more than \$1,000; and
3. Deer were identified more than 2 to 1 over other animal species (coyote, raccoon, waterfowl, prairie dog, skunk, beaver, mice/mole, rabbit, groundhog, fox) as causing the damage.

Some landowner comments included:

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 5

Chautauqua County - Deer population is out of control ...

Wildlife and Parks Department want a lot of deer with no liability for them.

Cherokee County - The department in control of wildlife had better be ready to pay for damages from wildlife.

Clark County - Most damage is eating trees, etc. Also running into deer on the roads ... less deer is better. Just a few deer is enough!

Ford County - Deer is our biggest damage.

Labette County - Deer eat bean plants. When they ripen, they eat the beans.

Logan County - Deer destroy much more than they eat.

Montgomery County - Wildlife and Parks needs to be very aggressive in controlling our deer population.

Smith County - Deer populations are growing to a nuisance level.

Thomas County - Crop damage by deer acceptable, but damage to young windbreak trees very irritating.

The farm and ranch members of Farm Bureau appreciate the sensitivity and efforts of the Kansas Department of Wildlife and Parks in recent years to better manage the deer herd. We believe S.B. 20 can be another useful tool for the Department.

Farm Bureau's support of S.B. 20 is based upon policy adopted by the 459 Voting Delegates representing the 105 County Farm Bureaus at the 74th Annual Meeting of Kansas Farm Bureau in Wichita on November 21, 1992. The policy concerning "Hunting and Fishing Regulations" in part states: "We support the initiative of the department in authorizing up to 5% additional permits to non-residents ... we encourage non-resident deer hunting participation and strongly support removal of the "doe only" restriction."

S.B. 20 is a good start. However, we recommend amendments. S.B. 20 on page 3, lines 15 to 22 limits non-resident deer firearm permits to 2% and archery permits to 5%. Farm Bureau policy supports 5% for both categories.

Kansas citizens desiring a deer permit must remain a high priority. We do not believe passage of S.B. 20 will result in Kansans being unable to acquire permits. First, non-resident permits would be in addition to the number allocated for Kansas residents. Also, a substantial number of "any deer" and "buck only" permits are not claimed in several deer management areas.

Chairman Sallee and Members of the Committee: In closing, we encourage you to approve S.B. 20. We believe passage will reduce deer damage, increase revenue to the state, provide communities opportunities for economic development and erase the black-eye Kansas has earned for being the only state that does not offer non-resident deer hunting. We have attached two newspaper clippings (Attachment A article from The Wichita Eagle dated November 9, 1992 and Attachment B article from the Manhattan Mercury dated November 23, 1992) that reinforce these points.

Thank you! We will attempt to respond to any questions.

The Wichita Eagle
Monday, November 9, 1992

PUBLIC FORUM

Kansas should open deer hunting

As a sportsman who's traveled to eight states this year, I can attest to the "black eye" Kansas and Kansans are receiving for being the only state that doesn't offer non-resident deer hunting. Without exception, from Pennsylvania to New Mexico, it is a fact that I had angrily thrown in my face by sportsmen.

A movement to even the score is indeed gaining momentum. Sportsmen in several states are asking their state game agencies to follow Iowa's lead and not let Kansans deer hunt in their state. Though I know of no serious action, talk is flowing about a court case to either open the state to non-residents or cut federal funding. I've also heard of some sportsmen who are urging a boycott of all non-resident bird hunting in Kansas. That would be a loss of important dollars to many small Kansas towns.

Granted talk is all we're facing right now, but let's hope that the 1993 Legislature will settle the problem before the proposed threats occur. The biologists of the Kansas Department of Wildlife and Parks have done an excellent job of managing the Kansas deer herd into one of, if not the, finest in America. They'll no doubt manage non-resident permits so it has no adverse effect on the quality of our deer herd.

Yes there are those who oppose such a move, saying their primary concern is the leasing of land by out-of-state hunters. If managed properly such action would be rare. And like it or not, the leasing of hunting rights is already spreading throughout Kansas. Kansas sportsmen are already learning that landowners need to be appreciated, if not with cash with other forms of payment including labor, the sharing of taken game and good honest friendship.

I spend many days and miles in the field. I see the numbers and quality of deer in my area. If I thought for one minute that non-residents would have an effect on my hunting, I would be against it.

Rich Pianalto

There's one fact non-resident opponents seem to ignore. Shouldn't it be up to Kansas landowners who gets to hunt their ground? With the issues of leasing and guiding aside, I know of many landowners who would like to host out-of-state children, grandchildren, friends and business associates on an occasional deer hunt. I think it's selfish to deny them that right to please a few squeaky wheels.

MICHAEL PEARCE
Manhattan



I would like to congratulate the Kansas Department of Wildlife and Parks on its successful management of the state's deer herd. The residents of Kansas should be proud of the trophy deer that we continue to place in the top of the record books.

For years, Kansas residents have traveled to neighboring and distant states to spend their money hunting big game. I feel it is time to get some

return on our dollars. With the deer herd that we currently have, a 5 percent increase in the harvest would not be a detriment to our herd in any way. It is time to stop being so stingy with our trophies and start sharing with our neighbors, as it will benefit Kansas residents in a substantial way.

Nonresidents coming into the state would spend \$200 for the permit, and spend around \$500 more while they are here. This will benefit the grocery store owner, motel operator, gas station attendant and nearly every resident in the state. Aren't we trying to promote tourism in Kansas? On the proposed archery tags alone, the state would see a minimum of half a million dollars. OK, so I am being very conservative.

In 1989, the Legislature approved nonresident tags, but cut it back to 2 percent, and to 1 percent for archery tags, along with some other insulting wording. Five percent is not at all out of line, in fact in some areas it is very conservative. For instance, archery tags at 5 percent would offer about 750 tags to nonresidents. The state wide success rate for archery hunters is about 32 percent. This would increase the deer harvest by about 240 deer. That comes up to about two deer per county. Not much is it?

As an avid bow hunter, I spend many days and miles in the field. I see the numbers and quality of deer in my area. If I thought for one minute that non-residents would have an effect on my hunting, I would be against it.

It is time for Kansas residents and sportsmen alike to start letting others enjoy our deer population as much as we do.

RICH PIANALTO
Lakin

Letters

Deer population must be thinned

To the Editor:

I thank *The Mercury* for printing the article "Deer, Deer, Be Careful Drivers" Nov. 17 from *The Kansas City Star*, authored by Russ Pulley. I hope all the "Bambi" lovers will see the facts of how much damage deer do to cars, crops, parks and forest preserves to say nothing of injured people. That figure of \$1.2 million in car repair costs in just Greater Kansas City is not a very acceptable way to cull the deer. Why not let hunters do the job without being harnessed by anti-gun people. And the Fish and Game Department should lessen its restrictions on who gets a deer permit and which sex they harvest.

What better way is there to control deer population, while making money on licenses and putting some good meat on people's tables. (Venison is low in cholesterol, I'm told.) With the rate of deer reproduction rising — yearling does, 1 fawn, 2 year olds; twins and three-year olds, triplets — I think it'll be a few years before so many regulations need to be placed on deer hunting. I'm tired of paying the higher insurance on my car so that a bunch of deer can cause more accidents. I live in the country and love seeing deer as well as anyone but too many is too many.

Ella Parsons
3693 Deep Creek Road.

Kansas Wildlife Federation, Inc.

P.O. Box 5715
Topeka, Ks. 66605

Affiliate of National Wildlife Federation
913/266-6185

200 S.W. 30th
Suite 106
Topeka, Ks. 66611

February 2, 1993

Testimony on SB20
Senate Energy and Natural Resources Committee

Presented by - Spencer Tomb, President

We are here to testify in support of SB20.

Non-resident deer hunting is a complex and controversial issue with Kansas sportsmen. On a 1988 membership survey as part of a KWF membership renewal drive, we asked the simple and direct question, "Do you think we should have non-resident deer hunting in Kansas?" Fifty-six percent of the responses were yes. The sample size was 689 responses. Thirty-three percent of the respondents were landowners. We think that when the issue is carefully explained most Kansas hunters are not opposed to non-resident deer hunting.

Our view is that when Kansans go out of state to hunt big game by the thousands and resident hunters have the opportunity to take more than one deer per person in Kansas, it would be selfish not to have carefully regulated, limited non-resident deer hunting. We think that limited non-resident hunting can be added into those areas of the state where deer and deer permits are plentiful and success in the drawing by landowners and general resident hunters is very high. We trust you and the Wildlife and Parks Commission more than a federal judge of a neighboring state to devise a reasonable system for non-resident deer hunting. Now that Kansas is the only state without non-resident deer hunting, we are very concerned about a reactionary exclusion of Kansas big game hunters by other states. Kansas residents cannot hunt deer in one state (Iowa), and Nebraska had a similar bill fail several years ago.

We are pleased to see the \$5, non-refundable drawing or processing fee added for non-resident applicants. The processing of applications is costly. The number of non-resident applicants will be high because our deer herd is almost legendary for trophy specimens. It could be very costly to process these applications. Other states have this fee for all applications.

In summary, we urge you to pass SB20 without modification (other than the increase of non-resident permits from 2% to 5%) so that we can share what we have with hunters from other states.

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 6



6031 S.W. 37th Street • Topeka, Kansas 66614-5128 • Telephone: (913) 273-5115
FAX: (913) 273-3399

Owens and Publishes The Kansas STOCKMAN magazine and KLA News & Market Report newsletter.

February 2, 1993

To: Senate Energy and Natural Resources Committee
Senator Don Sallee, Chairman

From: Mike Beam, Executive Secretary, Cow-Calf/Stocker Division

Re: Nonresident Deer Permits, SB 20

Mr. Chairman and committee members, I'm Mike Beam representing the Kansas Livestock Association. I'd like to make a brief statement in support of Senate Bill 20.

First let me say, the size of our deer herd has caused much discontent and concern among many landowners. This issue becomes quite emotional and always stirs a great deal of debate when we discuss it at our policy meetings. Usually the complaints include damage to crops, fences, and punctured tires from the antlers laying in the fields.

We appreciate the Wildlife and Parks efforts in recent years to issue more permits, especially antlerless permits, with the intention of causing a larger harvest of the deer population. I feel progress has been made, but we encourage Wildlife and Parks to continue to manage the herd to a number more acceptable to landowners.

KLA policy supports the issuance of nonresident permits. If the issuance of nonresident deer permits results in more total permits issued, it should put more pressure on our large deer herd and not reduce the number of permits available to Kansas residents.

More importantly, nonresident deer hunters provide more opportunities for farmers, ranchers, or guides to set up fee hunting ventures. Furthermore, out-of-state deer hunters will likely provide some economic activity in our small town restaurants and motels.

I'd be happy to respond to any questions or comments. Thank you.

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 7



Travel
Industry
Association of
Kansas

Jayhawk Tower
700 S.W. Jackson St., Suite 702
Topeka, Kansas 66603-3740
913/233-9465 FAX 913/357-6629

Date: February 3, 1993
To: Senate Committee on Energy and Natural Resources
From: Kevin Robertson
Re: SB 20 - Nonresident Deer Hunting Permits

Chairman Sallee and members of the Committee, my name is Kevin Robertson and I am appearing before you today on behalf of the Travel Industry Association of Kansas (TIAK).

TIAK strongly supports allowing nonresidents to purchase deer hunting permits to enjoy big game hunting in the state of Kansas.

The travel industry has estimated, with the help of the Wildlife & Parks Department, that 1,300 to 1,400 hunting permits could be sold per year in Kansas. Based on a survey of big game hunters completed in 1985, each of these hunters would spend an average of \$475 per trip to our state. That's a \$600,000 boost to the Kansas economy and the tourism industry in such businesses as motels, restaurants, gas stations, sports stores, and the like.

The only suggestion for change we would make on SB 20 is that the Committee consider lowering the permit fee to an amount less than \$200. This would attract an increased number of nonresident big game hunters to Kansas and further add to our state's local economies.

Thank you for your attention on this matter.

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 8



SENATE BILL 20

Non-resident big game hunting has always been opposed in Kansas, primarily, because resident big game hunters are afraid of losing their hunting permits and hunting lands to the non-residents wanting to hunt in Kansas. Kansas does not have a lot of public land or national forests to accommodate the additional hunting pressure. In Kansas, the majority of hunting is on private land. Kansas residents have heard about Texas, where the majority of the land is leased and unless you are wealthy, you can't afford to hunt. They are afraid that big game hunting in Kansas could become like Texas. They are afraid that allowing non-residents to hunt would increase leasing in our state.

On the other hand, based on information from Wildlife and Parks, Kansas is the only state that doesn't allow non-residents to hunt big game. And there are a tremendous amount of Kansas hunters that go to other states every year to hunt big game. Is this fair? The Kansas Bowhunters Association (KBA) doesn't think so and feels that Kansas needs to allow limited non-resident big game hunting, provided sufficient protection is given to the resident big game hunter. We must insure that all residents wanting to hunt deer in our state are given the opportunity to hunt before the non-residents are allowed permits.

If you pass Senate Bill 20, you must insure that you give this protection to the Kansas resident big game hunters. In order to help give some of this protection, we suggest Senate Bill 20 be revised to include the following:

In Section (1), add the stipulation that non-resident, archery and firearm, permits can only be issued in management units with leftover permits.

Explanation: In an effort to talk to sportsmen about non-resident big game hunting, the Department of Wildlife and Parks recently held meetings around the state. In these meetings, sportsmen were told that non-resident big game permits would only be issued to non-residents in management units that had left over permits from the regular drawing (for residents). This concept was pushed by Wildlife and Parks at these meetings. If non-residents were allowed to hunt, it would only be in units with leftover permits. Wildlife and Parks later explained that this didn't include archery permits. The KBA states that it must

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 9

include archery permits. The western part of our state would also be affected by non-resident big game hunting, not just eastern Kansas. The western part of our state has fewer deer and less habitat than eastern Kansas; areas with the habitat in Western Kansas could be leased to non-residents eliminating a place for the resident to hunt. Lets keep the non-residents, both archers and firearm hunters, in areas with sufficient deer populations and habitat to accommodate the non-residents and the residents.

In Section (m), the wording should be changed so that non-residents would only be eligible to hunt big game in Kansas every three years.

Explanation: This is one area that gives some protection to the resident hunter who is afraid of losing his hunting ground. We feel that a non-resident is less likely to come across our border to lease or buy property if they are only eligible to hunt every 3 years.

Add a section that requires all non-resident archery hunters to pass the International Bowhunter Education Course before applying for a permit.

Explanation: In most states, non-resident hunters must prove that they have passed an approved hunter safety course prior to applying for a big game permit. In some states, there are certain age groups that may be exempted. We feel that it is a must for all non-resident hunters to have passed an approved hunter education course. In addition, we would like to expand this to require all non-resident archers to have passed the International Bowhunter Education Course. The State of Nebraska passed this same requirements last year. Colorado requires hunter safety training, however, for archers, the International Bowhunter Education Course may be substituted for the firearms hunter safety course. In Montana, recent legislation requires all youths 12-17 and any first time bowhunters to take the International Bowhunter Education Course before they can hunt. We as residents, are going to be in the field, hunting with the non-residents if this bill is passed. We want it to be as safe as we can make it. One way is to make sure the non-residents have taken an approved hunter safety course and in the case of archers, the International Bowhunter Education Course.

Contact: Ron Smith, Chairman, Legislative Committee, Kansas Bowhunters Association
Telephone 913-266-8466

Colorado Bowhunter Ed.

HUNTER EDUCATION (SAFETY) COURSE COMPLETION IS REQUIRED

A person born anytime in 1949 or after must have completed an approved hunter education course or bowhunter education course (for purchase of archery licenses only) sanctioned by a state, county or province BEFORE applying for or purchasing a license. A hunter safety card must be presented when purchasing a license over-the-counter. Colorado does honor completion of hunter education (safety) courses from other states (photocopies of certificates or cards are not acceptable). The following may not be substituted and are NOT acceptable for this requirement:

1. Enrollment in a course at the time of application.
2. Military service.

Carry your card with you: The hunter education certificate must be carried by the person possessing the license when hunting, and produced when requested by an officer.

Per Mike Stone 8-27-92

In order for Colorado to accept bowhunter education (in lieu of hunter education) for bowhunters - the course must be sanctioned by a state.

"Sanctioned" =

- Endorsed on the student card (logo, wording, sponsor, etc)
- Be able to look up student numbers on file (Colo will recognize KS bowhunters if ^{Colo} they should call Pratt and we can look up the student #)

Colo will not recognize NBEF cards w/o state endorsement on the card

COLORADO

are void.

(8) It is unlawful for any person born on or after January 1, 1949, to purchase any hunting or trapping license unless he produces a hunter education certificate issued by the division, attesting to his successful completion of a division certified hunter education course taught by a division certified instructor which totals not less than ten hours of instruction. Any person required to obtain such a certificate shall have the certificate on his person while hunting or trapping. For the purposes of this subsection (8), the division shall recognize, in addition to Colorado hunter education certificates issued on or after January 1, 1985, those Colorado hunter education certificates issued prior to January 1, 1985, and any valid temporary hunter education certificate issued by the division, and the division may recognize the hunter education programs of other states or countries as being sufficient for the purposes of purchasing a hunting or trapping license in Colorado. Any person who violates this subsection (8) is guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of fifty dollars and an assessment of ten license suspension points.

(9) For the purposes of this section, any person or members of his family or his agents may take black-billed magpies, common crows, starlings, English or house sparrows, common pigeons, coyotes, bobcats, red foxes, raccoons, jackrabbits, badgers, marmots, prairie dogs, pocket gophers, Richardson's ground squirrels, rock squirrels, thirteen-lined ground squirrels, porcupines, crayfish, tiger salamanders, and common snapping turtles on lands owned or leased by him without securing licenses to do so when such wildlife is causing damage. Any person may take skunks or rattlesnakes when necessary to protect life or property. Any such wildlife taken under this subsection (9) may be sold by purchasing an appropriate small game or trapping license.

33-6-108. Possession as prima facie evidence. The possession of wildlife shall be prima facie evidence that the person having such possession is engaged or has been engaged in hunting, fishing, or trapping.

33-6-109. Wildlife - illegal possession. (1) It is unlawful for any person to take or have in his possession any wildlife that is the property of this state as provided in section 33-1-101, except as permitted by articles 1 to 6 of this title or by rule or regulation of the commission.

(2) It is unlawful for any person to have in his possession in Colorado any wildlife, as defined by the state or country of origin, that was acquired, taken, or transported from such state or country in violation of the laws or regulations thereof.

Montana Hunter Education Program



Montana Department of Fish, Wildlife & Parks

1420 East Sixth Ave. Helena, MT 59620 (406) 444-2535

November 1, 1991

TO: All Hunter and Bowhunter Education Coordinators

FROM: Tim Pool, ^{TP}Coordinator
Recreation Safety Education Programs

SUBJECT: HUNTER EDUCATION RATHER THAN REGULATION Bumper Stickers

Enclosed is an example of the above bumper sticker. So far in Montana, the response has been positive. We feel any safety education program can use this theme with slight modifications. We are willing to provide a master for you upon request.

It is our belief, if we can educate and inform all of our hunters regardless of the mechanism being used, the federal government, state legislatures and local fish/wildlife agencies will be less likely to impose further regulations/restrictions reducing hunting opportunities. We are all working together toward this goal.

I'll take this opportunity to explain our new bowhunter education requirements, as a result of the 1991 Legislature. Beginning in March of 1992, all youths 12 - 17 years of age must complete an approved hunter education program in order to buy a hunting license in Montana. Those same youths wanting to purchase a bow and arrow license must, in addition to hunter education, complete an NBEF bowhunter education program. In addition to the youths, all FIRST-TIME bowhunters, regardless of age, must complete an NBEF course in order to purchase a bow and arrow license to bowhunt during the special archery season. A first-time bowhunter is defined as an individual who cannot show proof of possessing any previous year's bow and arrow license from any state or province. Bowhunters from states that do not have a separate bow and arrow license, must possess the NBEF certificate in order to buy a Montana bow and arrow license.

As you know, the NBEF bowhunter course is provided in every state and province in North America. We would appreciate your support and explanation of this new law to reduce potential problems for bowhunters coming to Montana.

Hope your hunting seasons are enjoyable and safe. Let me know if I can help in any way.

Enclosure

SPORTSMANSHIP

— SAFETY —

CONSERVATION

Programs Related to Hunter Education

Bowhunter Education

This program is strictly for the archery hunter. The Nebraska Legislature passed a mandatory bowhunter education bill on April 4, 1991, and it was signed by the Governor the next day. The law takes effect January 1, 1993.

37-102. Section 1. (1) The commission shall establish and administer a bow hunter education program consisting of a minimum of six hours of instruction in the safe and ethical handling of bow hunting equipment. When establishing such a program, the commission shall train volunteers as nonpaid bow hunter education training instructors. The commission shall issue a certificate of competency to any person who satisfactorily completes a bow hunter education program established by the commission and shall print, purchase, or otherwise acquire materials necessary for effective program operation. The commission shall adopt and promulgate rules and regulations for carrying out and administering such program.

(2) On and after January 1, 1993, a person born on or after January 1, 1977, may be issued a permit for bow and arrow hunting pursuant to section 37-215, 37-215.02, or 37-227 only if such person has completed the bow hunter education program and received the certificate of competency. Such permit may be issued to a nonresident applicant who possesses a valid certificate of competency or its equivalent by any state which has a program recognized and accredited by the commission.

Course content is directed primarily toward archery deer hunting, although the safety material applies to all types of archery hunting, as does the section on hunter responsibility.

Administered much like the Hunter Education Program, student and instructor materials are maintained and handled by the Game and Parks Commission. Computer files are maintained for all students who complete the course and for all active volunteer instructors.

Deer hunter shoots another hunter in head

KIRWIN RESERVOIR — A northwest Kansas hunting accident early Thursday morning near Kirwin Reservoir in Phillips County came close to being a hunting fatality, according to the Kansas Department of Wildlife and Parks.

Laddie Yates, 32, Hays, fired an arrow that struck a second archery deer hunter, Theodore Lynn Parsons, 27, Pittsburg, in the head; rather than penetrating, the arrow carved a path, front to back, on the top of Parsons' head, according to a press release issued by the agency.

Yates took Parsons to the Plainville Rural Hospital, Plainville, where he was treated and then released. Yates was cited by the Department of Wildlife and Parks for violating designated shooting hours. The Phillips County sheriff has ruled the incident an accident and plans no further charges.

FRI NOV. 13, 1992 Hays

DAN BRUNETTI

CRAWFORD COUNTY CLERK
GIRARD, KANSAS 66743
(316) 724-6115

February 3, 1993

TO: Senate Committee on Energy and Natural Resources

FROM: Dan Brunetti, Crawford County Clerk, and Chairman
of The Kansas County Clerks Association Wildlife &
Parks Committee.

SUBJECT: Senate Bill 20

First I would like to speak to you on behalf of the County Clerks Wildlife & Parks Committee. As a Committee, we are not opposed to non-resident firearms deer hunting in the State of Kansas. Our objection lies in the fact that not all eligible hunters in the state that want to hunt deer are allowed to, and we will be allowing out of state hunters to come in and hunt.

The County Clerk's office, in most Counties, is the primary location for all hunting, fishing, boating and all other outdoor licenses. The major objection we hear on out of state deer hunting is that we have residents in our counties that are denied their first choice on their firearms application, some denied their second choice, and some denied a permit at all. It is a little difficult to explain to someone standing across the counter from you, why they, a Kansas resident, were denied a permit of their choice, let alone adding the fact that an individual from another state was granted a permit.

Now as a County Clerk from Southeast Kansas, I also object to non-resident firearms deer permits for the same reasons that the Clerk's Committee does. Crawford County is bordered on one side by Missouri, and on another side by Oklahoma. Each of these states allow non-resident deer hunting. But each of these states also gives the resident the privilege of being able to simply go to their local licensing agent and purchase a permit to hunt over the counter. This is a luxury that Kansas hunters have never known. We are subject to a lottery system that gives you no guarantee that you will be permitted to hunt in your own state.

Finally, as a firearms deer hunter in the State of Kansas for the last twenty years, I object to this proposal. There have been several years where I have not received my permit of choice, or have not received a permit at all. It is very frustrating to scout, plan, and schedule vacation, for deer season, only to discover that you did not receive a permit.

In short, we oppose legislation allowing a non-resident to come into our state and hunt deer with a firearm until the Kansas resident is afforded the privilege of walking into our office and purchase a permit to hunt deer in their own state.

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 10

TO: FAX 913-296-6718

TO CHAIRMAN OF ENERGY AND NATURAL RESOURCES COMMITTEE
DON SALLEE AND MEMBERS

There are many Kansas residents opposed and deeply concerned with the passage of Senate Bill 20. There has been great opposition to this in the past yet a few self interest groups drive on with this agenda regardless of who or how many residents it effects. Its not so much the threat of letting a non-resident hunt in state, but the by-product that will result from this. Land will be consumed thru leasing by organized guiding services. All Kansas sportsmen including deer hunters, upland bird hunters etc. will greatly be effected by this. The average hunter will no longer be able to find an area to hunt. Its already happened, several years ago when it appeared that a law would be passed to allow non-resident hunting for bucks, land was consumed in southeast Kansas. Now with this on the horizon again already an organized group out of Kansas City is trying to lease up big blocks of land in the Argonia area. Its not the landowner that will greatly benefit from this but the guiding service, charging exorbitant prices will consume the revenue most of which consist of established out of state hunting clubs. Deer numbers were down this year in southeast Kansas as reported by Game and Fish yet they want to stack an additional 5 percent quota on top of this. Claims are made from other state to shut Kansas off from hunting there. They have very little to offer. Claims have been made that many Kansans go to Colorado and Wyoming, those states contain vast amounts of national forest and public lands. Claims have been made that federal funding could be cut, these scare tactics are only to support the agenda of these self interest groups. Game and Fish is showing little responsibility or concerns of what will occur from this. At a minimum the 5 percent cap should be reduced in these trial stages. Non-resident bowhunters should have to pick a specific unit to hunt in. This would disperse, rather than drawing them in numbers like a magnet to these guiding services. Your decision will greatly impact the hunting availability of the people and there sons and daughters in Kansas who put you in office. Game and Fish has offered a weak agenda in addressing this problem and at least trying to maintain it.

Sincerely we the undersigned,

Dwight Engvall 505 E. 53RD ST. WICHITA, KS 524-6170 or 526-0428
James E. Wharton PO Box 606 Belle Plaine KS 67013 482-2425
Michael D. Ferry 1101 E. 75th St. 50 DERRY KS 788-1954
Tracy Chamberlain 316 GRACE ANDOVER KS 87002 733-4232
Haif Johnson 417 N Iowa OXFORD KS 67119 455-3268
Harvey Boyd 9415 E. Skinner Wichita KS 67207 685-0411
Dennis A. Ryle 7501 W. 11th Wichita, KS 67212 (316) 721-4775
John J. Ryle 330 Taylor Haysville KS. (316) 522-6926
Paul Ryle 2921 Exchange Wichita KS 67219 (316) 265-1231

Senate Energy & Nat'l Resources
February 3, 1993
Attachment 11



KANSAS

DEPARTMENT OF COMMERCE & HOUSING

Joan Finney
Governor

Bob Knight
Secretary

February 2, 1993

Mr. Marty Burke
Wildlife & Parks
5th floor, LSOB
Topeka, Kansas

RE: SB 20 - Big game permits

Dear Marty:

The Travel and Tourism Division is supportive of your agency's efforts to grant nonresident deer hunting licenses in Kansas. We realize Kansas is the only state that does not allow non-residents to apply for deer licenses and we believe this creates an adverse image of our support for our outdoor recreational opportunities. This is evident by comments made to our staff during recent outdoor sport shows.

Allowing nonresident licenses will generate additional revenues for the state with out-of-state hunters spending monies on food, gas, lodging, hunting equipment and supplies, etc. This does not take into consideration any additional expenditures on other forms of entertainment and other retail purchases.

We are confident this proposal would benefit the state of Kansas immeasurably and look forward to promoting same.

Sincerely,

Greg W. Gilstrap
Director

Senate Energy & Nat'l Resources
February 3, 1993

STATE OF KANSAS



DIVISION OF THE BUDGET

Room 152-E

State Capitol Building

Topeka, Kansas 66612-1504

(913) 296-2436

FAX (913) 296-0231

Joan Finney
Governor

Gloria M. Timmer
Director

February 1, 1993

The Honorable Don Sallee, Chairperson
Committee on Energy and Natural Resources
Statehouse, Room 128-S
Topeka, Kansas 66612

Dear Senator Sallee:

SUBJECT: Fiscal Note for SB 20 by Senate Committee on Energy
and Natural Resources

In accordance with KSA 75-3715a, the following fiscal note
concerning SB 20 is respectfully submitted to your committee.

SB 20 would amend statutes which pertain to nonresident deer
hunting. Under current law, only "doe-hunting" permits can be
issued to nonresident hunters. Current law also provides that no
more than two percent of the total resident deer permits issued can
be issued to nonresident hunters using firearms. The current
maximum percentage on permits issued to nonresident archers is one
percent. Current law also prohibits the issuance of any
nonresident hunting permits after July 1, 1993. SB 20 strikes this
provision.

Provisions of SB 20 strike language which limits nonresident
hunters to doe-hunting only. The bill also increases the portion
of total permits that can be issued to nonresident archers annually
from one to five percent.

The Department of Wildlife and Parks presented figures based
on estimates that it will issue 49,000 firearm deer permits and
15,000 archer deer permits annually. Under provisions of SB 20,
the two percent maximum issuance of nonresident firearm permits
would allow the Department to issue 980 firearm deer permits to
nonresident hunters. It should be noted this two percent maximum
is in current statute, but has never been implemented by the
Department. The five percent maximum proposed for nonresident

Senate Energy & Nat'l Resources
February 13, 1993
Attachment 13

The Honorable Don Sallee, Chairperson
February 1, 1993
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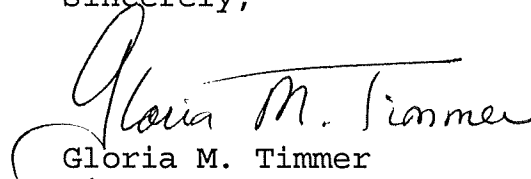
archery permits would allow for the Department's issuance of 750 archery deer permits to nonresident hunters. The one percent maximum current authorized for archery nonresident permits has never been implemented by the Department either. Current Department hunting rules and regulations authorize a \$200 fee for nonresident hunting permits. Assuming that the Department of Wildlife and Parks will issue a maximum of 1,730 nonresident deer hunting permits, that translates into fee receipts of \$346,000.

SB 20 also proposes a \$5 nonresident application fee for individuals desiring a nonresident deer hunting permit. The Department of Wildlife and Parks estimates that it will receive 5,000 nonresident applications annually. This application fee could yield approximately \$25,000.

The Department reports that it would require expenditures totaling \$15,000 annually from the Department's Wildlife Fee Fund to process the nonresident applications and permits.

In summary, anticipated annual fee receipts of \$371,000 and expenditures from the agency's fee fund of \$15,000 are in addition to amounts contained in the *FY 1994 Governor's Budget Report*.

Sincerely,



Gloria M. Timmer
Director of the Budget

cc: Dick Koerth, Wildlife and Parks

020.fn

Kansas Wildlife Federation, Inc.

P.O. Box 5715
Topeka, Ks. 66605

Affiliate of National Wildlife Federation
913/266-6185

200 S.W. 30th
Suite 106
Topeka, Ks. 66611

January 27, 1993

The Honorable Don Sallee, Chair
Senate Energy and Natural Resources Committee
Kansas Statehouse
Topeka, Kansas 66612

Dear Senator Sallee:

It is our understanding that Wildlife and Parks Secretary Theodore D. Ensley will appear before the Senate Energy and Natural Resources Committee for confirmation. We wish to inform you that we consider Mr. Ensley well qualified for the position of Secretary of Wildlife and Parks. He is an experienced administrator and a professional in his field of Park and recreation management. He holds a bachelor's degree in biology with extra work in fisheries management. His several years of service on the Kansas Wildlife and Parks Commission has given him a basic understanding of KDWP's programs and mission.

It is our opinion that Mr. Ensley's education, training and administrative experience put him on an equal footing with similar agency heads in adjacent states. Mr. Ensley should be able to represent Kansas effectively at regional and national meetings where issues and programs are discussed. We therefore support his confirmation.

Respectfully,



A. Spencer Tomb
President

AST:lc

Senate Energy + Nat'l Resources
February 3, 1993
Attachment 14