

2021 Kansas Pronghorn Harvest Report

PERFORMANCE REPORT STATEWIDE WILDLIFE RESEARCH AND SURVEYS

A Contribution of Pittman-Robertson Funds
Federal Aid in Wildlife Restoration

Grant W-39-R-28

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December 2021



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Background – Pronghorn, often referred to by hunters as antelope, mostly exist in Kansas in the westernmost two to three tiers of counties, and mostly South of I-70. There's been a hunting season for pronghorn in western Kansas since 1974. The firearm pronghorn season has been four days long since 1990, starting on the first Friday in October. The archery pronghorn season was nine days long from 1985 to 2004, and encompassed the two weekends prior to the firearm season. Since 2005, the archery season has reopened on the Saturday following the firearms season and continued through the end of October. A muzzleloader only season was initiated in 2001. It has begun immediately after the archery season and ran for four days. Muzzleloader permit holders can also hunt with muzzleloader equipment during the four day firearms season, giving them eight days total.

Archery permits have been unlimited due to traditionally low success rates. Firearm and muzzleloader permit demand and success rates require these permits to be limited draw. They are allocated by preference point system. (Applicants with the highest number of preference points are awarded permits.) Demand for these permits has been high. The number of applicant and preference point purchases for these limited permits has jumped significantly in each of the past three seasons to 2220 this season (Figure 1). The result of this increase is that general residents are likely going to be impacted by some serious point creep in the coming years. At least part of this increase in applications is the result of the Department consolidating application deadlines for simplicity in 2018 and then providing preference point holders with better notification of upcoming deadlines.

By state law, half of the limited-draw permits are awarded to landowner/tenants and half are awarded to general residents. Draw statistics from 2021 are provided in Appendix 1. Applicants are allowed to buy a preference point without applying for the permit, so preference points higher than necessary to draw sometimes show up in the draw stats. For example, in unit 2 firearms, several general residents had 8-10 preference points, but six were all that were needed for a guaranteed draw.

Harvest – Pronghorn harvest and hunter activities are compiled annually through harvest reports sent to all pronghorn hunters. Paper report cards and postage paid tooth envelopes are initially sent to all hunters. After season, a direct link to an online harvest survey is e-mailed to nonrespondents for whom we have an active e-mail address. About a week later, a reminder email is sent. A week after that, all nonrespondents are sent a second mailing of the paper harvest survey. Two to three weeks later, a direct email is sent asking only one question about their overall harvest success (see Fig 6). Results are extrapolated to nonrespondents. Response rate by permit type in 2021 was: archery –61%; firearms – 90%; and muzzleloader – 89%.

An estimate of 170 pronghorn were harvested in 2021. Total pronghorn harvest since hunting seasons were initiated in 1974 is provided in Figure 2. The 2021 harvest

was down 24% from 225 pronghorn in 2020.

Since 1986, all permits have been valid for any antelope. In 2021, an estimated 154 bucks and 16 does and fawns were harvested. The sex and age composition of the harvest since 1995 is provided in Figure 3. In recent years, over 90% of the harvest has consisted of yearling or older bucks. The estimated date of harvest is provided in Figure 4.

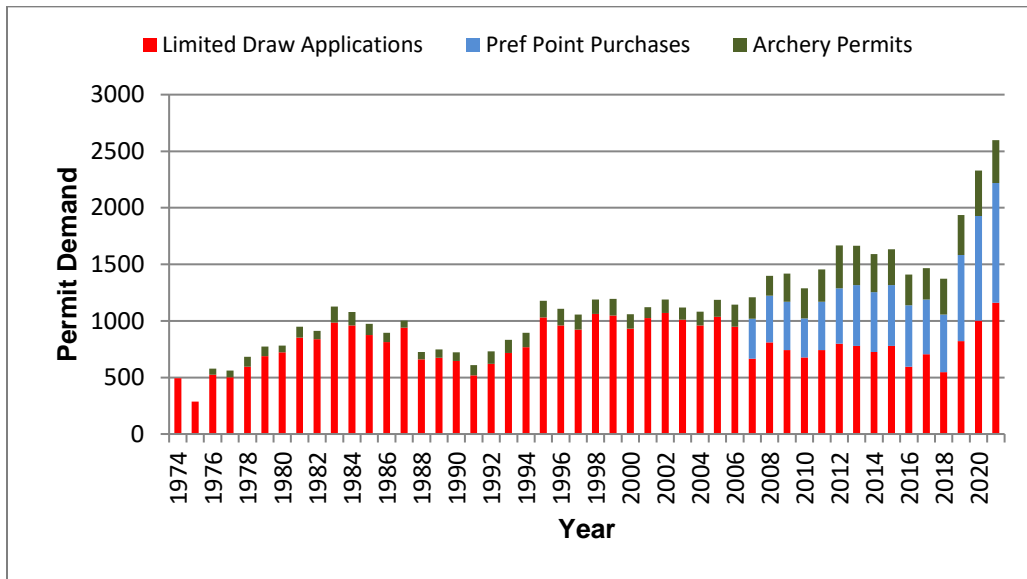


Figure 1. Pronghorn permit demand as indicated by limited draw (firearms and muzzleloader) permit applications and preference point purchases, as well as unlimited archery permit sales in Kansas since 1974.

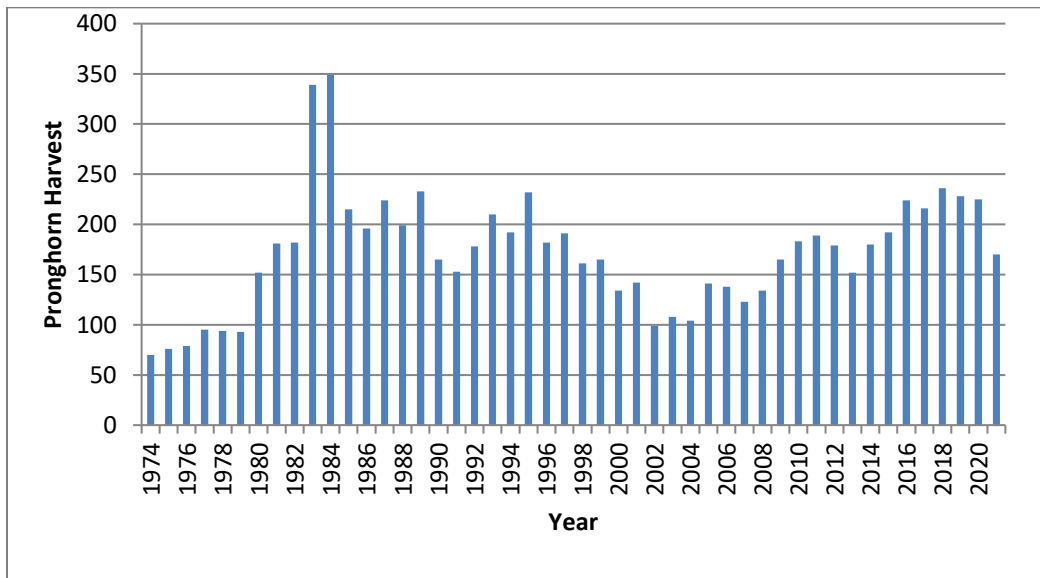


Figure 2. Total pronghorn harvest in Kansas since hunting seasons were initiated in 1974.

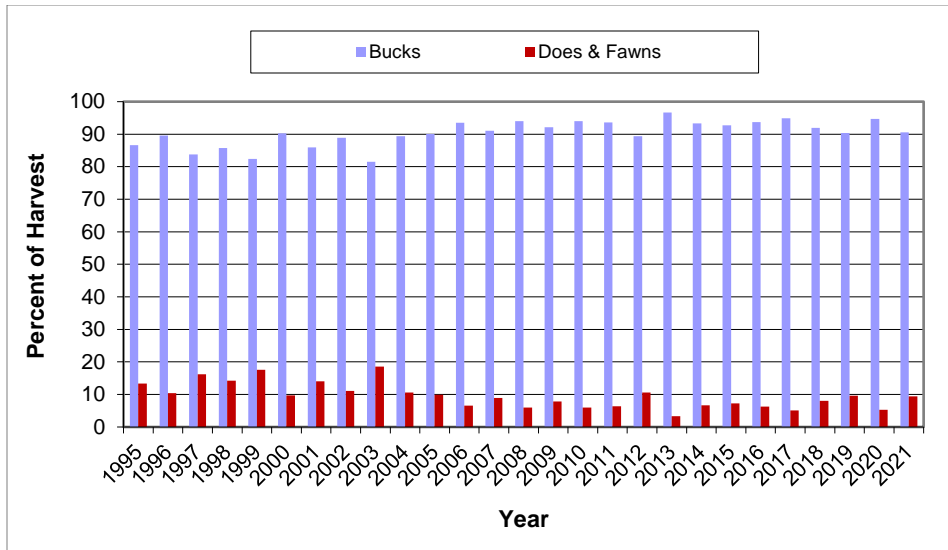


Figure 3. Sex and age composition of annual pronghorn harvest in Kansas since 1995.

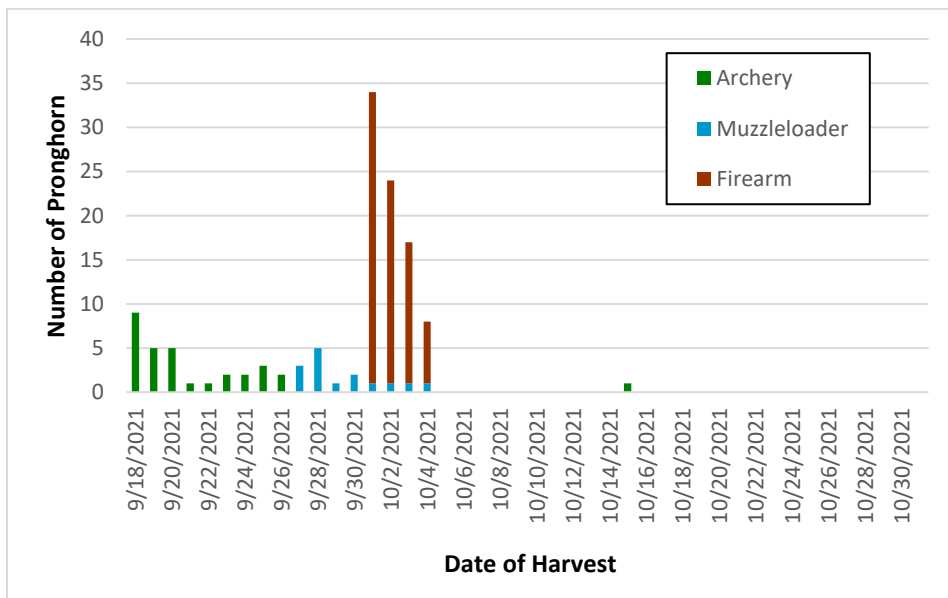


Figure 4. Estimated date of harvest and permit type by which pronghorn were taken in Kansas during the 2021 season (n=125).

Harvest by Weapon Type – The number of pronghorn permits sold by weapon type since 1995 is provided in Figure 5. Limited draw permit allocations were reduced by about 20% this year due to decreasing pronghorn numbers, but archery permit sales were the third highest on record (n=377), down from last year’s all-time high of 402. Harvest classification by permit type is presented in Figure 6. Harvest by permit type since 1995 is provided in Figure 7, and success rate by permit type is found in Figure 8.

Pronghorn hunters are asked to rank their hunt satisfaction on a 7-point scale ranging from extremely dissatisfied to extremely satisfied. This serves as a general indicator of hunt quality likely reflecting harvest success, pronghorn numbers, buck quality, access, crowding and various other factors of the hunt. Mean satisfaction by permit type since 2013 is found in Figure 9, and hunter satisfaction by permit type is found in Figure 10.

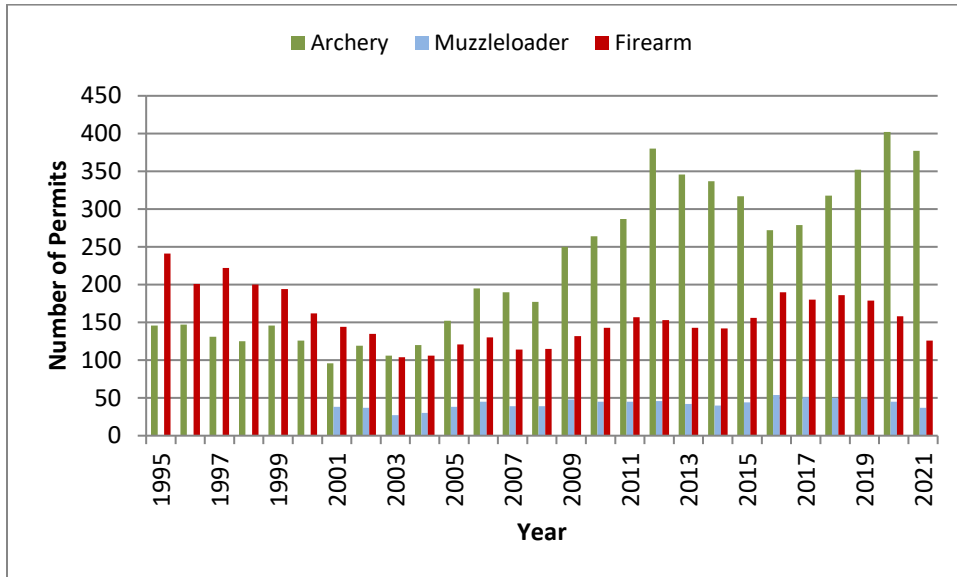


Figure 5. Permits sold by weapon type for pronghorn in Kansas since 1995.

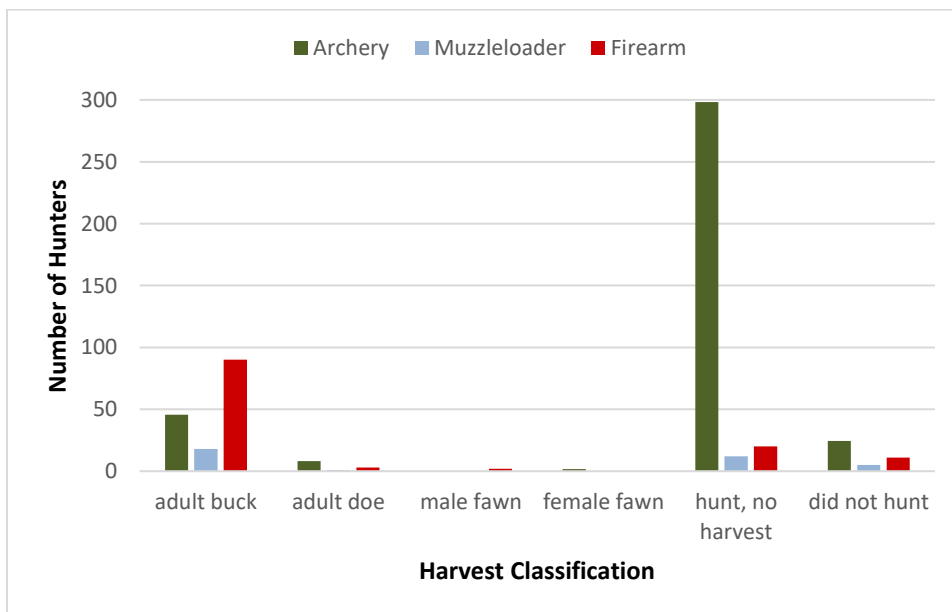


Figure 6. Harvest classification by permit type for 2021 Kansas pronghorn hunters.

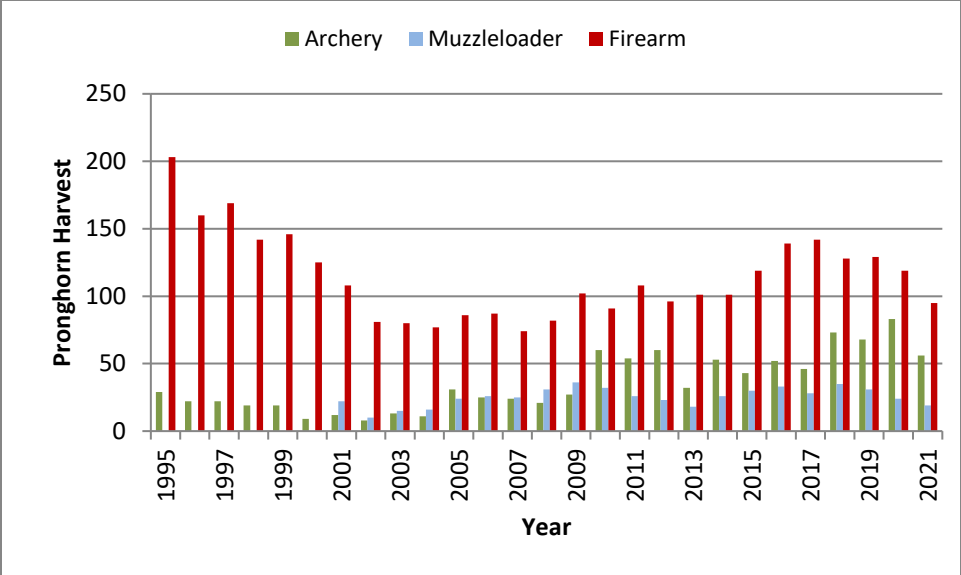


Figure 7. Pronghorn harvest in Kansas by permit type since 1995.

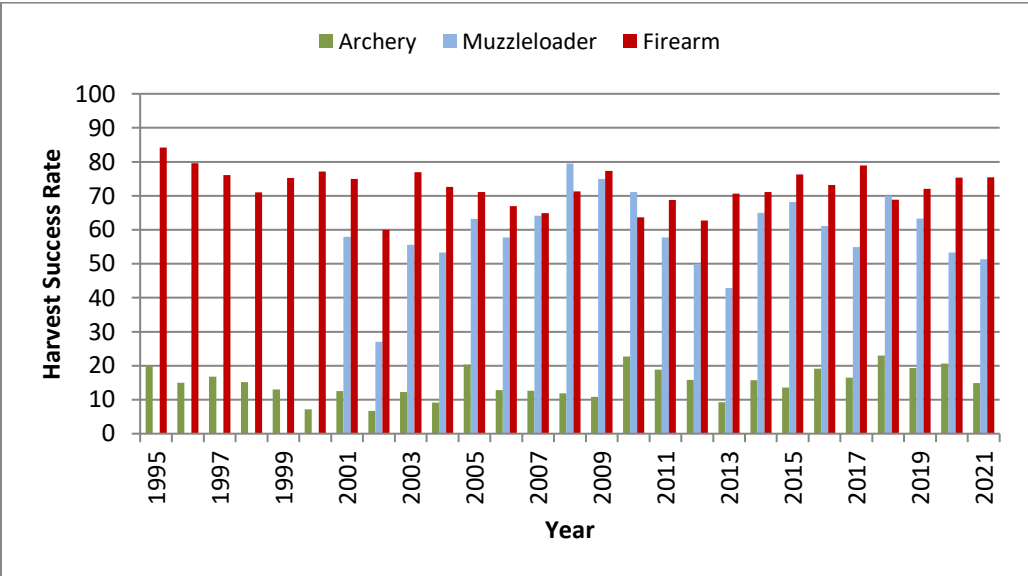


Figure 8. Harvest success rate by permit type for pronghorn in Kansas since 1995.

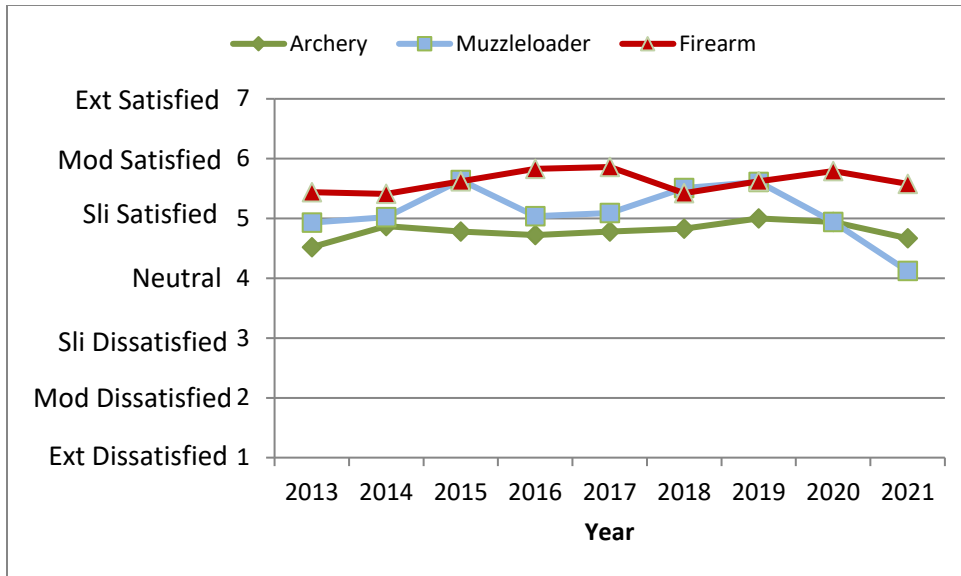


Figure 9. Mean pronghorn hunter satisfaction by permit type in Kansas since 2013.

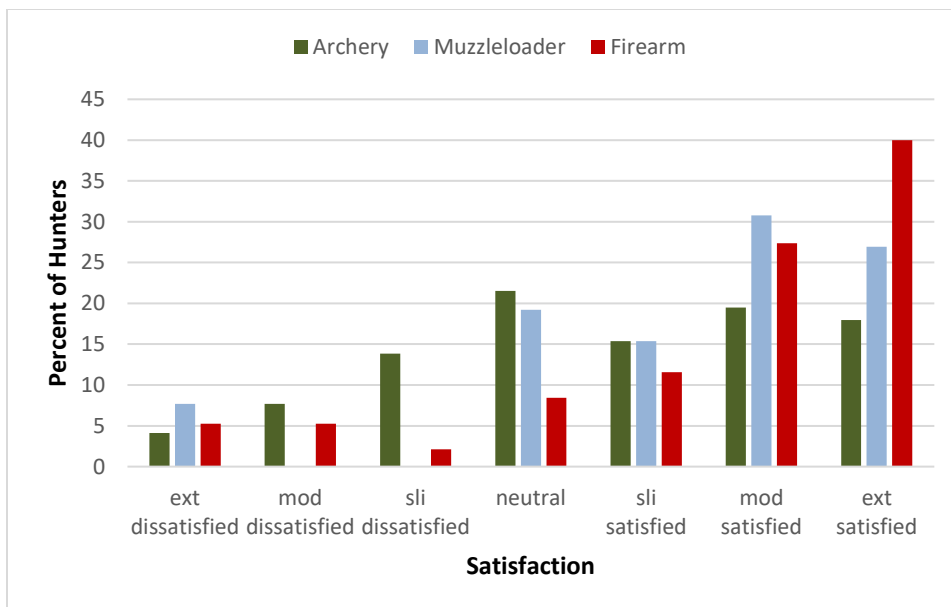


Figure 10. Hunter satisfaction by permit type during the 2021 Kansas pronghorn season.

Harvest by Unit – There are currently three management units open to pronghorn hunting in Kansas (Figure 11). These units, which are also deer management units, were adopted in 2001 in order to reduce confusion over big game unit boundaries. Pronghorn are generally uncommon in the easternmost parts of all three units. Firearm

and muzzleloader permits are valid in one unit whereas archery permits are valid in all three, so unit analyses below are limited to firearms and muzzleloader permits.

Total firearm and muzzleloader permits allocated in each unit is provided in Figure 12. Total harvest by unit is found in Figure 13. Harvest success by unit is found in Figure 14. Mean Hunt satisfaction by unit is provided in Figure 15. Harvest success in Units 17 and 18 decreased, which was likely reflected in the decreasing hunt satisfactions in these units as well.

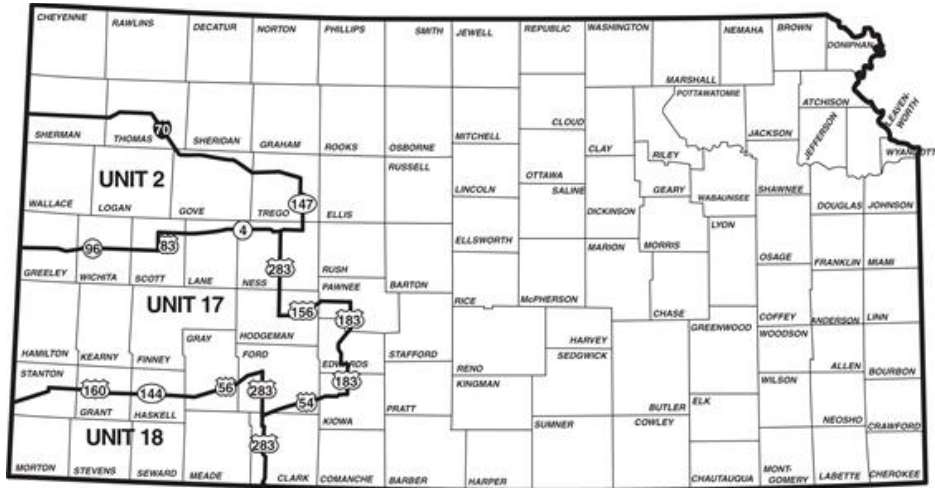


Figure 11. Kansas pronghorn management units.

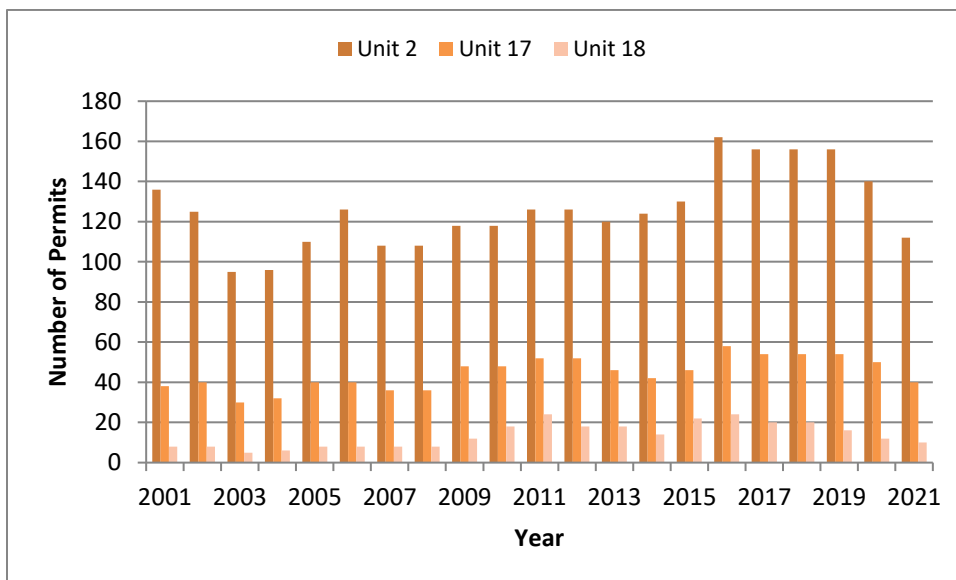


Figure 12. Number of firearm and muzzleloader permits issued in each of the three Kansas pronghorn management units since 2001.

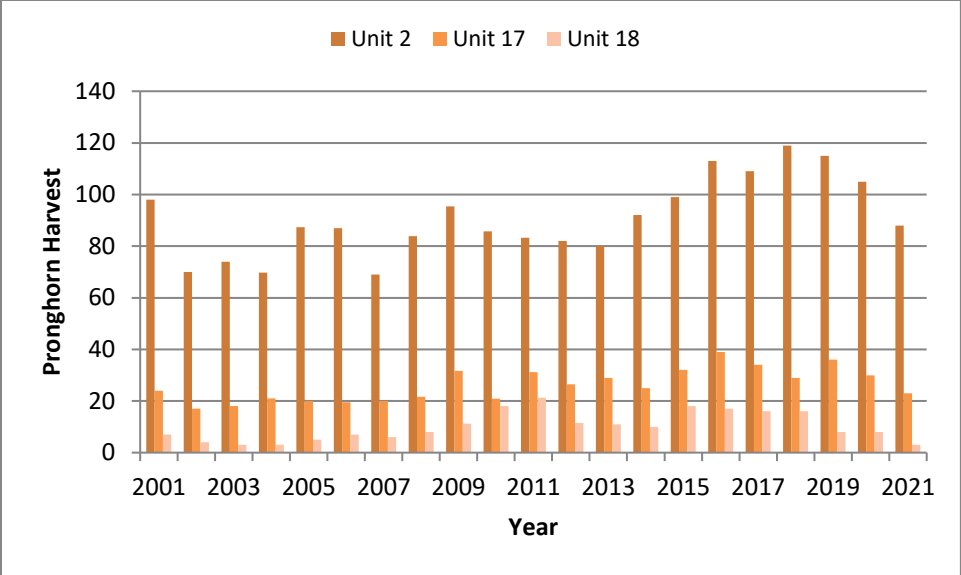


Figure 13. Pronghorn harvest in Kansas by management unit for firearm and muzzleloader permit holders since 2001.

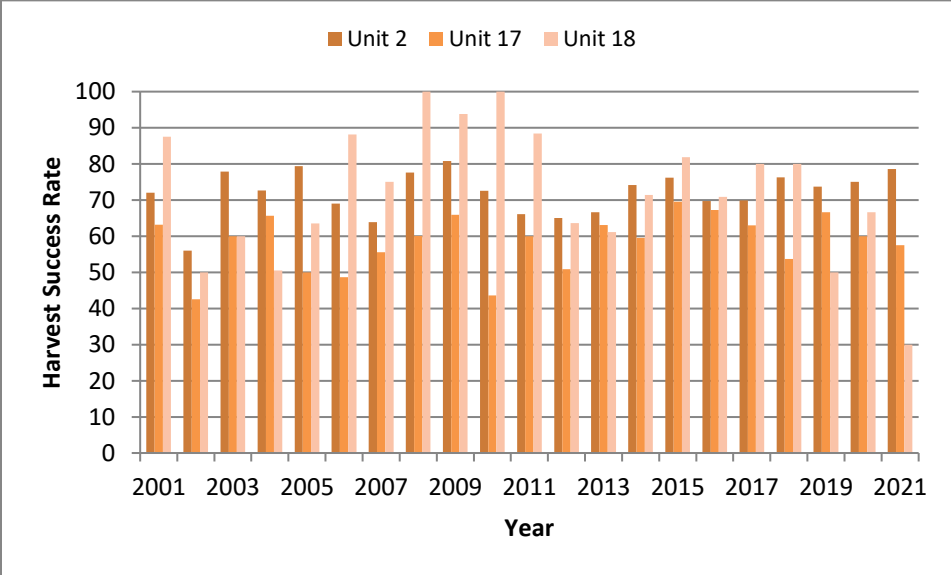


Figure 14. Harvest success rate by pronghorn management unit for firearm and muzzleloader permit holders in Kansas since 2001.

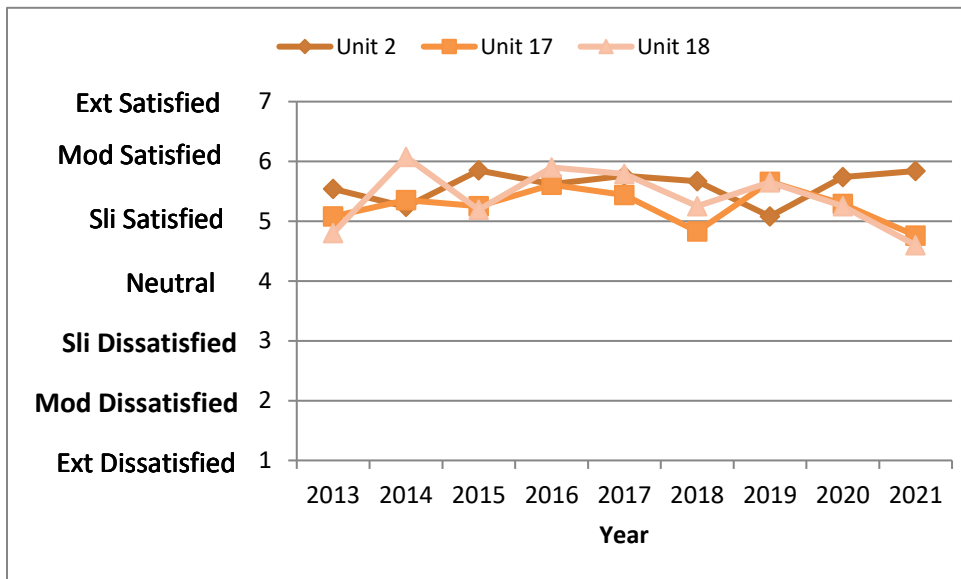


Figure 15. Mean pronghorn hunter satisfaction by unit for firearm and muzzleloader permit holders in Kansas since 2013.

Horn size – As part of the harvest report, the Department began asking hunters to provide horn length and circumference measurements to the nearest 1/8 of an inch in 2009. Hunters take the measurements themselves, and given the frequency of whole numbers (8, 9...) and even halves (8.5, 9.5...), this data should be considered an estimate. However, it still provides for a meaningful comparison with age data.

Frequency of adult buck horn lengths and circumferences can be found in Figures 16 and 17, respectively. A scatterplot of this data can be found in Figure 18.

Mean horn lengths and circumferences of adult buck pronghorn harvested in Kansas can be found in Figure 19. This year the mean horn length was 12.14 inches, up from the average the previous three years of 11.96. The mean circumference was 5.77 inches, down from the average of the previous three years of 5.88. Mean horn length and circumference by management unit and weapon can be found in Figures 20 and 21, respectively. The means for both of these measurements have been pretty consistent over time. There is no difference in mean pronghorn horn size by unit. By weapon type, the mean horn length of pronghorn taken by archery hunters is slightly lower than that of pronghorn taken by firearm and muzzleloader.

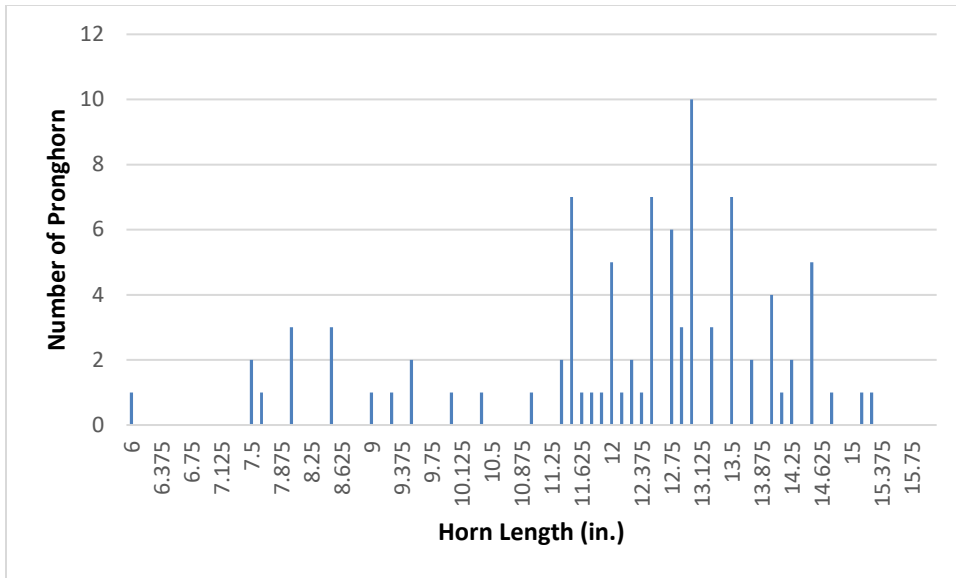


Figure 16. Horn length of adult buck pronghorn harvested in Kansas during the 2021 season (n=91).

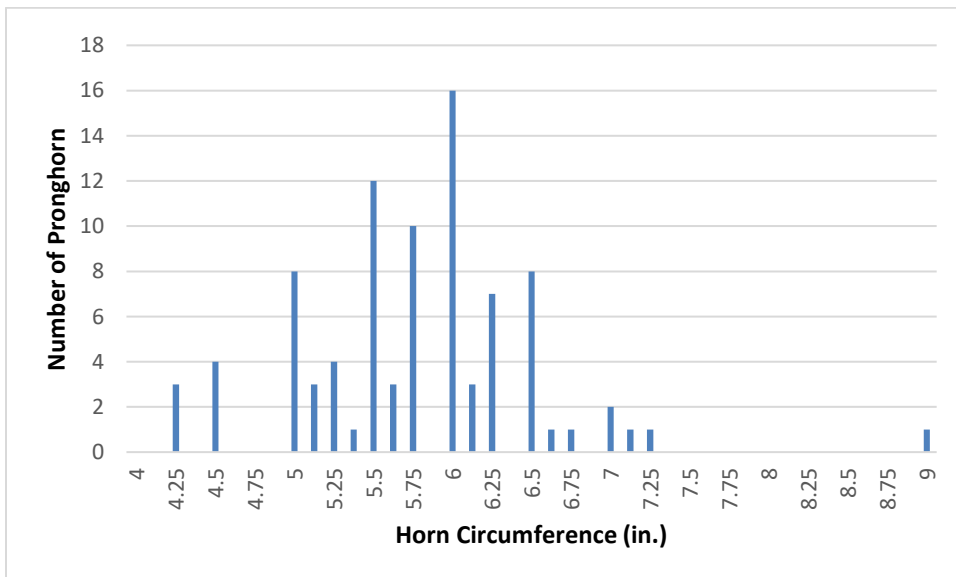


Figure 17. Horn circumference of adult buck pronghorn harvested in Kansas during the 2021 season (n=89).

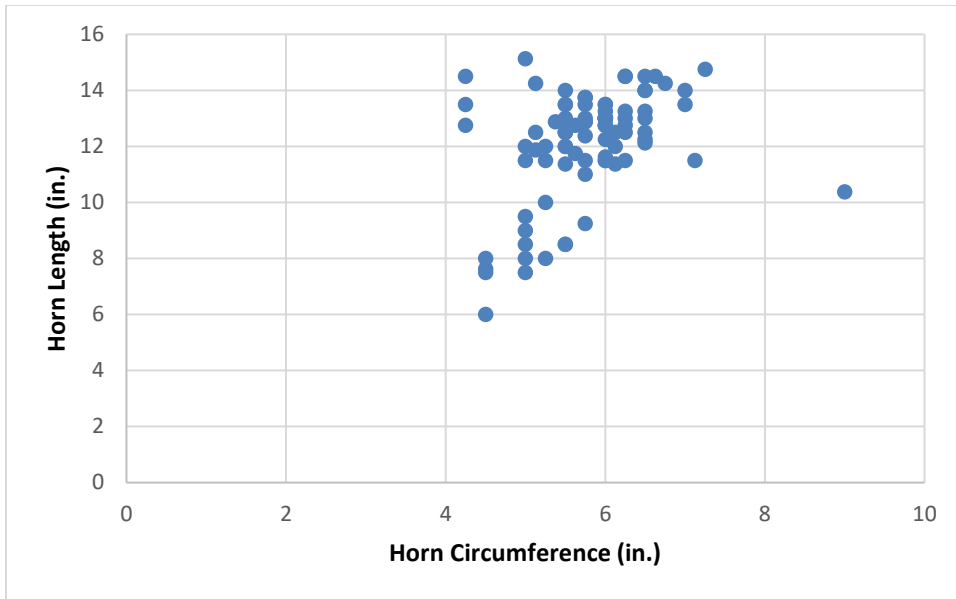


Figure 18. Scatterplot of horn length and circumference of pronghorn harvested in Kansas during the 2021 season (n=88).

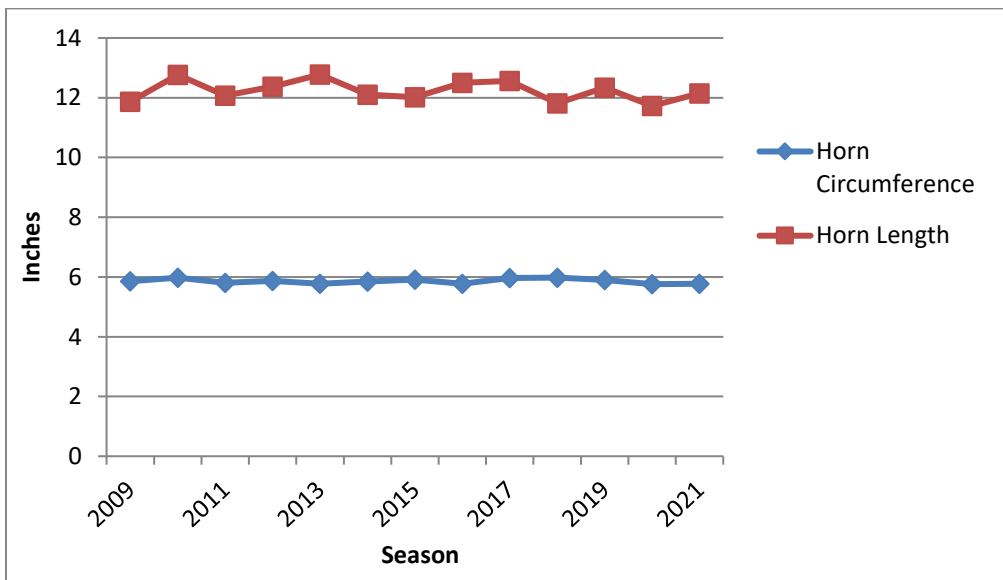


Figure 19. Mean horn length and circumference of pronghorn harvested in Kansas since 2009.

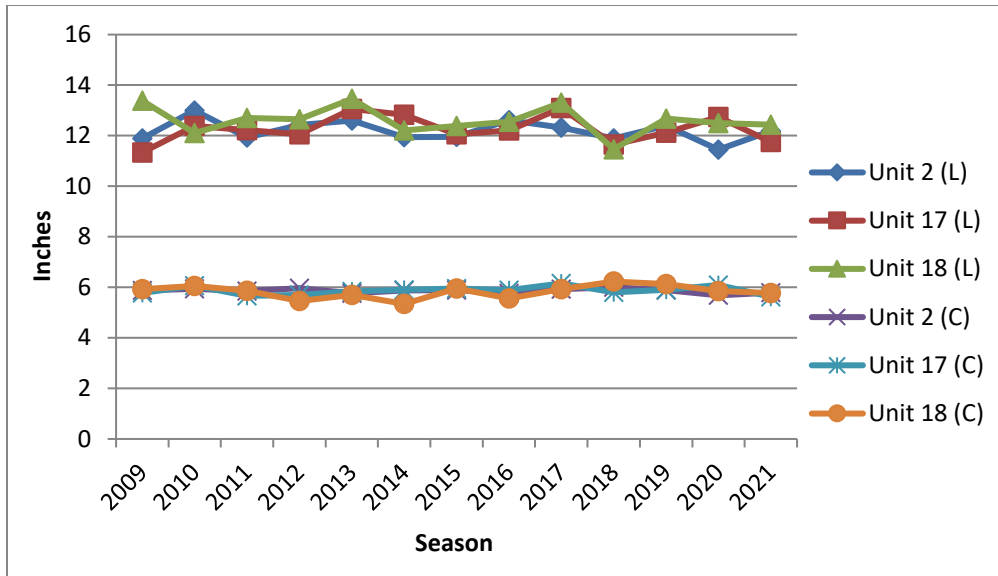


Figure 20. Mean horn length (L) and circumference (C) of pronghorn harvested in Kansas since 2009 by management unit.

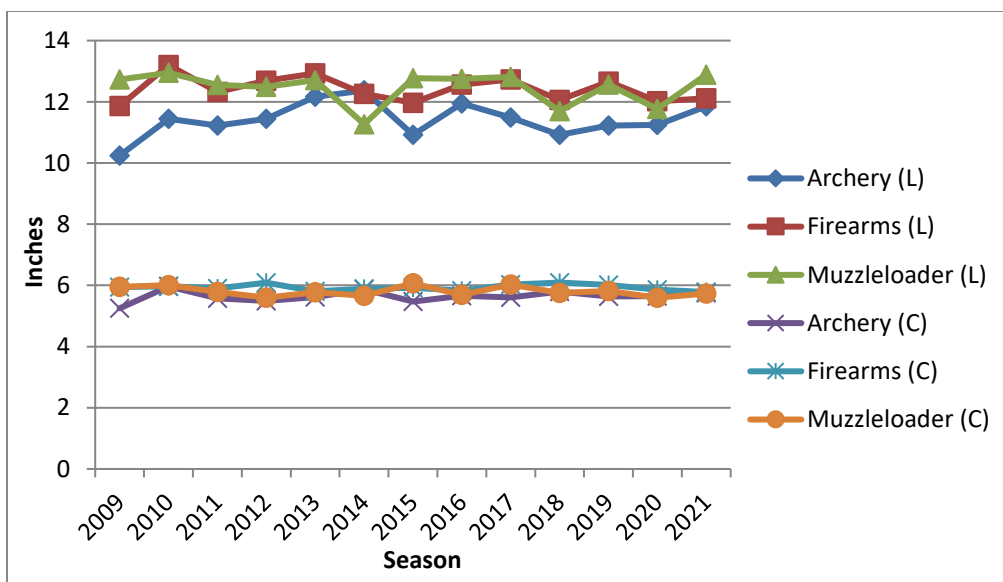


Figure 21. Mean horn length (L) and circumference (C) of pronghorn harvested in Kansas since 2009 by weapon of harvest.

Archery Equipment – Both the number of archery hunters (Fig. 5) and total archery harvest (Fig. 7) have increased substantially in about the past 10-15 years. As a result, some hunters have expressed dissatisfaction with the amount of archery hunting pressure in traditional destination areas. We continue to monitor some of the factors that may have contributed to the increased archery demand.

In 2006, unlimited nonresident archery permits were established. In 2021, 10 of these permits were sold, and the 5-year average sales is just 8.2 per year. These permits are considered an insignificant factor in increased archery harvest pressure.

In 2013, the opportunity to use crossbows during big game archery seasons was expanded to all archery hunters. The percent of archery hunters using each type of archery equipment is found in Figure 22, and the actual number of crossbow and non-crossbow archery hunters is presented in Figure 23. Since legalized, crossbow hunters have comprised a generally increasing number and percent of total archery hunters in the state, though both decreased slightly this season. It is uncertain whether crossbow hunters are additive to other archery hunters based on this data (i.e. whether these hunters would be hunting in the archery season with traditional equipment if they weren't allowed to use a crossbow). In addition, when crossbow hunters are removed from archery permit sales, current sales are still high averaging 260 over the past 3 years.

A comparison of crossbow and other archery hunter success rates is found in Figure 24. Crossbow hunter success rates had been averaging about 7% above non-crossbow archery hunter success but this year, that difference jumped to 14% (26% crossbow vs 12% non-crossbow). Crossbow hunting is now part of big game archery hunting in Kansas, and we have no plans to change that, but we will continue to monitor the effectiveness of the different equipment types.

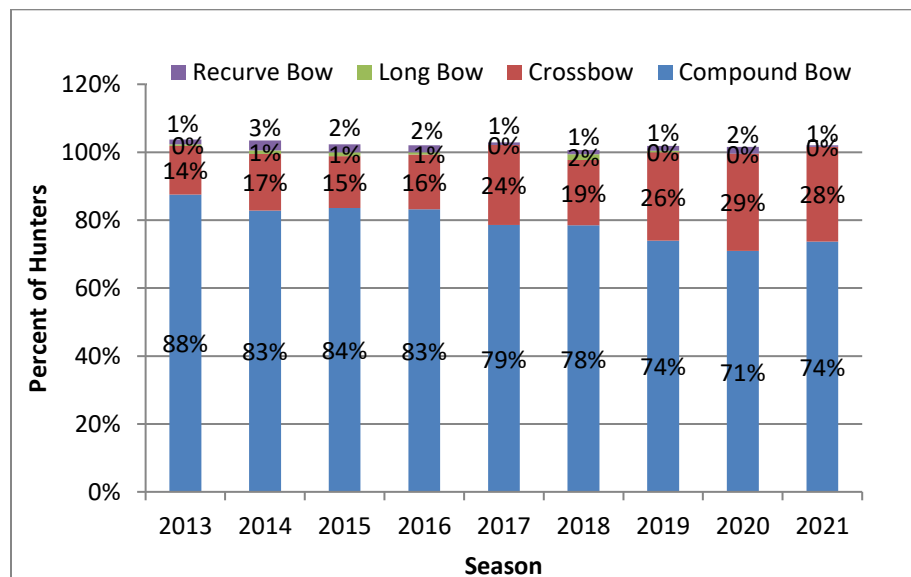


Figure 22. Percent of archery pronghorn hunters using different types of archery hunting equipment since 2013. (Totals exceed 100% some years because some hunters used more than one bow type.)

Since 2012, hunters have been allowed to apply for or purchase preference points toward a limited draw permit, and then if unsuccessful, obtaining an over-the-counter archery permit. This seemingly resulted in an immediate and significant increase in permit sales (see Fig. 5) and generally allowed archery hunters to “double dip” into multiple hunt types. The Department has proposed eliminating this opportunity due to previously mentioned concerns about point creep with limited permits as well as to address some of the concerns

expressed by hunters about harvest pressure during archery season. This proposal is currently being considered by the KDWP Commission and would go into effect next season if approved.

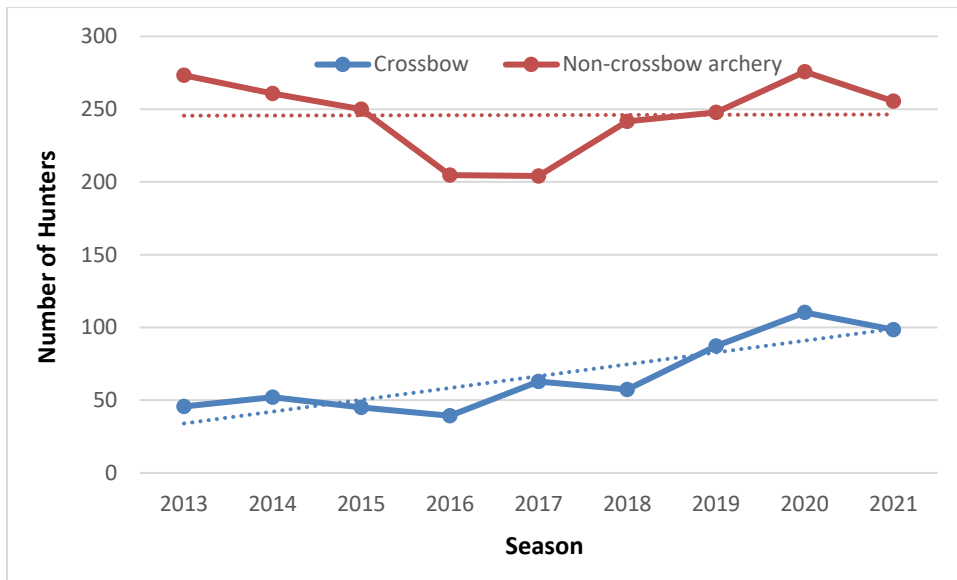


Figure 23. Number of active archery hunters using crossbows and not using crossbows (Non-crossbow archery) since 2013, and linear trendlines for each user type.

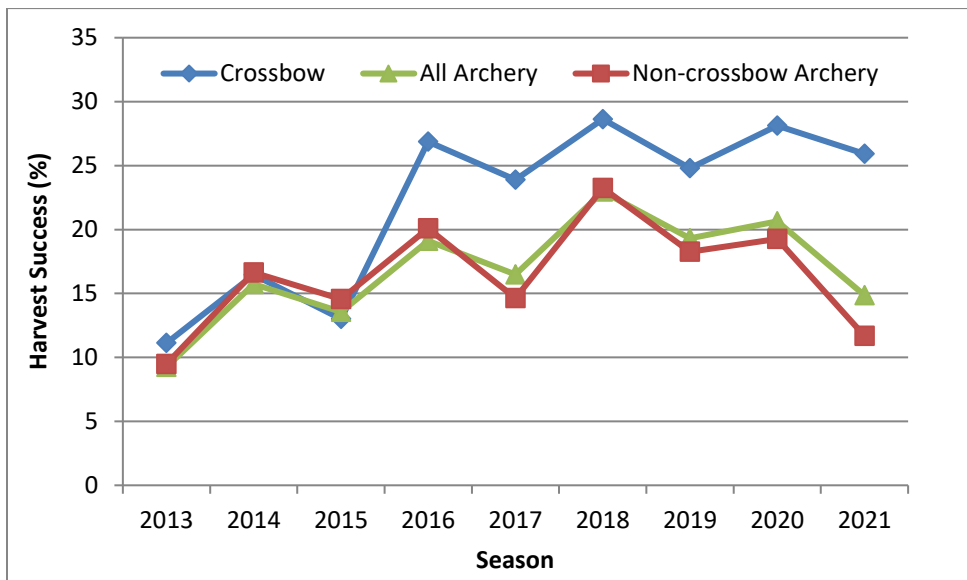


Figure 24. Harvest success rates by Kansas pronghorn hunters who used crossbows, did not use crossbows, and all archery hunters combined.

EQUAL OPPORTUNITY STATEMENT

This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the U.S. Department of the Interior and its bureaus prohibit discrimination on the basis of race, color, national origin, age, disability or sex (in educational programs). If you believe that you have been discriminated against in any program, activity or facility, or if you desire further information, please write to:

The U.S. Fish and Wildlife Service, Office of Diversity and Civil Rights Programs- External Programs, 4040 North Fairfax Drive, Suite 130, Arlington, VA 22203

Appendix 1.

2021 Antelope Draw Stats

Management Unit	Permit Type	Permits Authorized	Total # of Applicants (1st) Choice	Preference Points (PP)	Number of Permits issued by Pref Pt LO/T	Number of Permits issued by Pref Pt GEN	Total Number of Permits Drawn
Unit 2	Muzzleloader	12 LO/T 12 GEN	10 LO/T 91 GEN	0	7		12 LO/T 12 GEN
				1	4		
				2	1		
				3			
				4		12	
Unit 2	Firearms	44 LO/T 44 GEN	146 LO/T 557 GEN 2 NR TENANT	0			43 LO/T 37 GEN 7 YOUTH 1 NR TEN
				1	40		
				2	4		
				3			
				4			
				5		26	
				6		8	
				7		7	
				8		1	
				9		1	
10		1					
Unit 17	Muzzleloader	4 LO/T 4 GEN	2 LO/T 24 GEN	0	2		4 LO/T 4 GEN
				1	1		
				2	1		
				3		4	
Unit 17	Firearms	16 LO/T 16 GEN	52 LO/T 160 GEN	0			16 LO/T 16 GEN
				1	15		
				2			
				3			
				4	1	12	
				5		1	
				6		1	
7		2					
Unit 18	Muzzleloader	2 LO/T 2 GEN	0 LO/T 17 GEN	0	1		2 LO/T 2 GEN
				1	1		
				2			
				3			
				4		2	
Unit 18	Firearms	3 LO/T 3 GEN	20 LO/T 79 GEN	0			3 LO/T 3 GEN
				1			
				2	3		
				3			
TOTAL		162	230 LO/T 928 GEN 2 NR TENANT	0			162
				1			
				2			
				3			
Preference points purchased 1060			1160				

Appendix 2.

2021 Pronghorn Hunter Comments

Comments
An extreme amount of bow hunters. A lot of pressure on animals.
Antelope numbers are down, didn't see the numbers we have in years past. Why does it take so long to draw a rifle tag?
Antelope were not active during the day this year most likely due to the full moon. Saw alot but most were bedded during shooting hours.
Did not hunt due to loss of hunting permission, where had permission previous years.
Did not seem to see as many animals as previous years
Didn't see the numbers that I have seen in years past. Didn't see as many younger/first year pronghorn as well. Talked to a lot of hunters. Lots of hunters putting a lot of pressure on walk-in areas. We hunted mostly private but every walkin had people at it or driving by all day. 100 yard shots with crossbows was common based on what hunter said.
Extend the archery season
got close but not close enough
Had a blast hunting the archery season but was amazed how many other hunters I saw! Saw few antelope but had a great time hunting new wiha and exploring new country.
Hunter numbers continue to climb and there isn't enough public ground to support it. The last 2 years the amount of vehicles and people is nuts. Having the opportunity to get a tag is nice, but if there isn't enough public to support the hunters it isn't any fun. Lucky I have some private ground I have permission to hunt. I also watched guys guard the road as the antelope came to cross like they were going to shoot them at the road. Antelope numbers also seemed down in comparison to some of the years I have hunted. Still found them in pockets though. The private ground I can hunt was also affected. As more hunters go out there I have seen more trespassing. It would almost be nice if tags were more limited. You could almost offer a private ground only permit and a public ground permit and limit some of the pressure if guys would follow rules. Has hunting pressure increases if harvest rates increase it might not be bad to look at some sort of tag limitations. I know over the last 5 archery years I have managed to shoot 4 bucks, but I walk a lot of miles and have spent quite a bit of time out there. Either way thanks for the opportunity KANSAS.
I didn't make it out as much this year but pronghorn numbers seem significantly down compared to previous years. We have been trending downward in the last 5 years in the eastern range of unit 2.
I had to move to Connecticut before the season began.
I have been hunting antelope in KS for 8-9 years and every year the herd gets smaller and smaller. We struggled to find antelope, the herds we did find were minimal and the herds numbers were very small yet the tag price continues to raise. I am not opposed to the high priced tags, but would like to see kdwp do something to get the herd back where it was before we no longer have a huntable herd. Something needs to be done to prevent this from happening.
I really enjoyed my hunt, the terrain and quality of walk in hunting available are top notch. I saw a lot of antelope and several mature bucks. I will definitely continue to apply and hunt KS antelope in the future.
I saw pronghorns, had good hunting, just never got closer than 60yds. It is a great hunt!
I think crossbows should NOT be an option during archery season but I'm sure you hear that all the time.
It appeared to me that the numbers were down from the previous seasons I have been hunting. Not near as many younger class animals as before
It should not be so hard for a lifetime license holder since 1990 to draw a rifle permit for antelope.
Its hard with a bow!
Just didn't have enough time to hunt.
Kansas pronghorn numbers seem down over the last 2 years
Let's continue to reintroduce antelope to get their numbers up to a more huntable amount
My general comment on my 2021 pronghorn archery hunt is that I noticed less hunting pressure compared to previous years and lower pronghorn numbers/activity compared to previous years.
Need to do something for numbers of goats the numbers are way down
Needs to be draw only.

Not as many pronghorn as there was last year
Not enough land to hunt, we saw a bunch but they were all on private land
NOT VERY MANY PRONGHORN OUT THERE ANYMORE
Numbers are down still. Two years in a row (IMO). Pressure was comparable to last year and there was a consistent amount of trucks circling herds on public.
NUMBERS ARE LOW ON THE EASTERN RANGE. BUCK NUMBERS ARE VERY LOW.
Numbers are still low. Not sure if it is from the wind towers or not. The population use to much higher in the areas where they wind towers are now in Thomas/Sherman Counties.
Numbers seem down this year
Numbers seemed way down compared to the last four years where we had lots of encounters and success.
please send info on age
Population density seemed lower than the last three years. Hunter participation also appeared to be lower.
Put in over 500 miles didn't see a single antelope
Saw a large number of mature 75" range bucks, good antelope numbers just very few on publicly huntable ground
Season needs to be longer
Seemed odd to have extremely small bucks with a harem of does as well as a group of does with no buck. Only saw 2 satellite bucks the whole trip. Also only saw 1 pronghorn on WIHA.
Seems as though the herd is declining, only 7 Pronghorn on the 14k acre ranch I hunt, normally 20-40. I think we need to eliminate the OTC tags for NR's, as well as take the crossbows out of archery season. Thanks for all you do!
Seen a lot less pronghorn this year than last year.
Seen a lot of pronghorns this year
Slow season due to absolutely no rut action. Should of hunted more water holes.
Thank you
Thank you for opportunity and if State would like to measure pronghorn located at King Taxidermy
Thank you for the walk in hunting program!
The reason for the extremely dissatisfied is for the 3rd year in a row hunting pressure was up and antelope down. I hunt a mix of private and wiha but even though i have gained more access to private ground every year it seems that the opportunities to stalk have gone down. 3 years ago i got on at least 3 stalks a day 2yrs ago that was down to 1 to 2 stalks a day this year i had only 4 opportunities in the 9 days that i hunted every group of hunters that i talked to agreed that the numbers were allot lower than years past. I would rather see it go to a draw system than to see the numbers continue to decline. I spoke with several ranchers in the area that i was hunting and they also said it seemed that the last few years the winter herds have been smaller and that the antelope are not in the areas that they used to see them in the past. I suppose that it is possible the herds have changed areas do to pressure but i have not seen the herds on the big ranches that do not allow hunting like i had in the past. I am concerned that the sale of tags has out weighed the management of this resource. I hope this is not the case. I have seen that allot more guys hunting with crossbows that used to use compound and when asked why the switch they told me it was so much easier to get shots since they do not have to raise up from the prone position. They also have a major misconception of the actual lethal range of a crossbow. this all being said I have no issue with crossbow hunting my wife and kids use one for deer hunting I am just concerned that more antelope are being wounded than are being reported. I hope that some changes are made before the antelope numbers get to a level that is not recoverable.
The small amount of WIHA utilized by pronghorn is overpressured with OTC Archery hunters. I would support Kansas making all Pronghorn hunts draw only.
the weather was so hot and dry i was afraid to to do any hunting because of fire danger
There is not enough WIHA in the area the antelope are in. It makes it difficult to get permission sometimes. I also feel as though the numbers are down. There are more hunters hunting and it didn't seem as though we saw the numbers we have in the past.
There should be an easier way to acquire a landowner firearm permit. As a farmer, I would like to harvest an antelope which live and feed off my land.

THERES NO ANIMALS
To many crossbow hunters jumping out of trucks
Too few antelope around. Too much pressure, please do not open up archery season to non-residents. It would not benefit the resource at all.
Too many hunters
Too much pressure from bowhunters that can buy non-resident permits. Too many hunters & not enough game. Did not see one antelope on WIHA.
Unable to hunt due to father's illness. Son hunted Greeley and Wallace Counties, no luck
Very difficult hunt with a bow in the wide open spaces. Definitely a humbling experience.
very low numbers between Sharon Springs & Wallace area. 3 days hunted only saw a few groups.
Way more hunting pressure during the early season than i would have expected with being my first time hunting pronghorn
We did not have high expectations of our son harvesting an animal but wanted to offer the opportunity. Again the animals are so stressed it was very difficult hunting them even on private ground.
We hunted WIHA however saw a lot of antelope on surrounding ground so there is a chance. Good experience.
We saw a lot more antelope hunting (location withheld) than we did hunting Cimarron the last couple years. Most of them seem to stay on private ground.
why is fish and game in Finney County pasturing cattle on our public hunting areas? Concannon and Finney lake both had cattle on them when we youth hunted and archery hunt . this is our only public hunting area. who is responsible and who allows this to continually happen?
Would have filled out the paper survey, but it didn't arrive until after season was open and I'd been hunting already -- found it when I returned home. Head is at the taxidermist now, so no way to provide teeth or a measurement.
Your biggest problem with the antelope out there is the amount of crop land being planted to corn. The antelope dont like it and are being pushed out of a lot of areas. And the next problem is the amount of road hunters and poaching that happens out there... it is seriously out of control and needs to be handled! The overall population is not what it was 8 years ago and they are definitely needing some help..