



WILDLIFE MANAGEMENT AND RESEARCH NOTES

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	TITLE: 2008 Biological Deer Check Stations	

Abstract: During the 2008 deer-hunting season, division personnel examined 3,606 deer to assess sex and age-structure. Yearling deer represented 40% of the adult male harvest, down 4% from 2007, and 38% of the female harvest, equal to 2006 and 2007. The percentage of 1.5 year old males in the adult male harvest has decreased 10% over the last 3 years, while the yearling female harvest has remained relatively stable during that time. Hunters were also asked whether their deer would be commercially or self processed. No difference was found between deer 1.5 years old or greater for either sex per processing type; however, fawns for both sexes were underrepresented for commercially processed animals. If the current method for checking in deer were to change, adjustments would need to be made from the current system used to calculate the number of female fawns in the harvest

During the 2008 opening weekend of the deer firearm season, division personnel aged and sexed 3,606 deer at 51 privately operated check stations and 13 Fish and Wildlife Areas statewide. Yearlings (1.5 years) accounted for 33% of aged deer and 2.5 year olds accounted for 32% (Table 1). Yearling deer represented 40% of the adult male harvest, continuing its downward trend since 2004 (Table 2). Female yearlings comprised 38% of the adult female harvest, continuing a similar pattern since 2006 (Table 2). The proportion of 2.5 year-old males in the adult harvest increased 1 percentage point while the corresponding female statistic decreased 3 percentage points over last year. Among adult males in the sample, 20% were estimated to be ≥ 3.5 years old, the highest statistic recorded for that category in recent years.

The proportion of 1.5 year-old males in the adult male harvest can provide insight into and a measure of the effects of past antlerless harvests on current herd recruitment. This value, as a measure of a change in demographics, can also give indications of large increases in harvest pressure in a given area. Table 3 shows the average age of adult males and females harvested during the opening weekend of firearms season between 1993-2008. The average age of harvested females experiences moderate annual changes, but stays relatively stable throughout time. The average age of harvested males has slowly increased since 2000. It is unknown whether this is a result of the implementation of the OBR in 2002.



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Additionally, hunters checking in deer were asked whether they would self-process their deer or have it commercially butchered. Our goal was to determine if any age class would be underrepresented at processing plants in light of the elimination of check stations. Analyses were conducted using a two-way table with a Chi square statistic to determine significance. We looked at the difference between all age classes (all ages), fawns vs. all adults (fawn vs. adults), and within the adult age class (adults only). For analysis purposes, adults are considered 1.5 years old or greater. We found that male and female fawns were self processed significantly more than commercially processed ($p < 0.001$ and $p < 0.01$, respectively, Table 4). Approximately 62% of male fawns were self processed, while other age classes hovered around the 50%. Likewise, 63% of females were self processed, compared to the 49-54% found in other age classes. Upon elimination of the fawn age class, we found no difference between adult age classes of males and females ($p = 0.62$ and $p = 0.48$, respectively, Table 4). If mandatory check stations were eliminated, no adjustment would be necessary to determine age structure for deer ≥ 1.5 years old. Male fawns would likely be enumerated under any replacement system. Female fawns would have to be estimated using an alternate method than what is currently used now, since their age class will not be a true representation of what is seen at processing plants.

Table 1. Number of deer checked in during opening weekend of the 2008 firearms season.

	0.5	1.5	2.5	3.5+	Total
Female	276	254	237	181	948
Male	331	930	925	472	2658
Total	607	1184	1162	653	3606

Table 2. Age structure of adult deer examined during opening weekend during the 2001-2008 firearms season. (Percentages may not add to 100 due to rounding)

Sex	% of Adult Harvest in Age Class			
	Year	1.5	2.5	3.5+
Female	2001	40	35	24
	2002	40	35	25
	2003	40	36	23
	2004	37	36	28
	2005	42	33	25
	2006	38	39	23
	2007	38	38	24
	2008	38	35	27
Male	2001	56	31	14
	2002	53	33	14
	2003	54	30	16
	2004	50	35	15
	2005	50	35	16
	2006	46	38	16
	2007	44	39	17
	2008	40	40	20

Table 3. Average age of adult harvested deer during the first weekend of firearms season (93-08).

Year	Adult Male	Adult Female
1993	2.05	2.62
1994	1.98	2.55
1995	1.99	2.59
1996	1.99	2.43
1997	2.09	2.59
1998	2.02	2.60
1999	2.01	2.53
2000	2.01	2.53
2001	2.10	2.48
2002	2.13	2.50
2003	2.14	2.46
2004	2.17	2.57
2005	2.19	2.47
2006	2.23	2.49
2007	2.26	2.53
2008	2.36	2.58

Table 4. Percentage of harvested deer in each sex and age class by processing method and corresponding significance values for the 2008 firearms season.

Males

<u>Age</u>	<u>Commercially Processed</u>	<u>Self Processed</u>
0.5	10.17	14.93
1.5	36.97	33.43
2.5	35.23	33.88
3.5+	17.62	17.76
# of deer	1,209	1,340

Chi 2 (P value)

All ages	13.94 (<0.01)
Fawn vs Adult	12.97 (<0.001)
Adults only	0.97 (0.62)

Females

<u>Age</u>	<u>Commercially Processed</u>	<u>Self Processed</u>
0.5	24.32	33.67
1.5	26.78	25.9
2.5	28.75	22.31
3.5+	20.15	18.13
# of deer	407	502

Chi 2 (P value)

All ages	10.9 (<0.02)
Fawn vs Adult	9.43 (<0.01)
Adults only	1.45 (0.48)