

# 2006 JOB COMPLETION REPORT

SPECIES : Pronghorn  
 HERD UNIT : BAGGS  
 HERD UNIT # : 438  
 HUNT AREAS : 53,55

PERIOD COVERED : 06/01/2006 - 05/31/2007  
 WYOMING PROJECT NO. : W-27-R  
 PREPARED BY : TIM WOOLLEY

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
<b>1. PREHUNT SEX AND AGE RATIO COUNT (per 100 females)</b>					
Juveniles	56	43	54	67	50
Males	47	66	44	47	58
Yearling Males	13	20	12	14	24
Mature Males	34	46	32	33	34
<b>Total Sample Size</b>	1,411	1,290	1,908	1,634	1,368
<b>Adequate Sample Size</b>	1,728	1,581	1,500	2,140	1,794

<b>2. HARVEST</b>					
Adult Males	314	386	445	502	566
Yearling Males	0	0	0	0	0
<b>Total Males</b>	314	386	445	502	566
Females	64	47	92	315	617
Juveniles	2	7	10	19	43
<b>Totals</b>	380	440	547	836	1,226

	<u>#</u>		<u>%</u>		<u>#</u>		<u>%</u>		<u>#</u>		<u>%</u>	
<b>3. AGE STRUCTURE OF FIELD CHECKED ANIMALS</b>												
Juvenile Female	0		0		3	4	1	1	5	4		
Yearling Female	1	1	1	1	1	1	2	2	2	2		
Adult Female	7	10	2	2	10	13	22	18	34	26		
Juvenile Male	1	1	0		2	3	3	2	5	4		
Yearling Male	2	3	3	3	5	6	2	2	5	4		
Adult Male	58	84	82	93	57	73	94	76	80	61		
<b>Total Sample Size</b>	69		88		78		124		131			

<b>4. POSTHUNT SEX AND AGE RATIO COUNT (per 100 females)</b>									
Juveniles		0	0	0	0	0	0	0	0
Males	0	0	0	0	0	0	0	0	0
Yearling Males		0	0	0	0	0	0	0	0
Mature Males		0	0	0	0	0	0	0	0
<b>Total Sample Size</b>		0	0	0	0	0	0	0	0
<b>Adequate Sample Size</b>		0	0	0	0	0	0	0	0

<b>5. POPULATION TRENDS</b>					
<b>Trend Count Dates:</b>					
Trend Count:		0	0	0	0
Post Season Pop Est:		9,000	9,700	11,300	13,100
Herd Model Pop Est <sup>1</sup> :		8,300	9,300	10,300	11,200
Line Trans Pop Est:		8,000	0	10,900	0

<sup>1</sup> End of year population estimate

# SEX AND AGE COUNT REPORT

SPECIES : Pronghorn

HERD UNIT : BAGGS

YEAR : 2006

PREPARED BY : TIM WOOLLEY

PREHUNT CLASSIFICATION

DATES : August

Hunt Area	----- MALES -----			Females	Juveniles	Total
	Yearlings	Adults	Total			
53	80	91	171	321	215	707
55	77	133	210	337	114	661
<b>Total Sample</b>	157	224	381	658	329	1,368
<b>Adequate Sample</b>				500	863	431

Precision @ 90 C.L.
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**Juveniles / 100 Females : 50 ± 5**  
**Total Males / 100 Females : 58 ± 6**  
**Adult Males / 100 Females : 34**  
**Yearlings / 100 Females : 24**

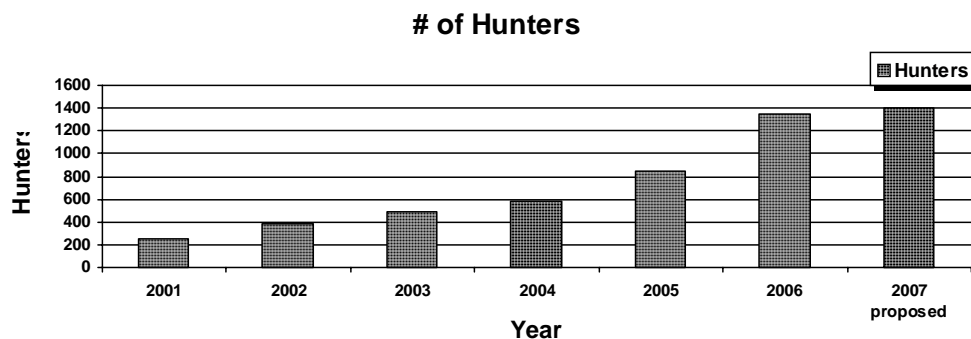
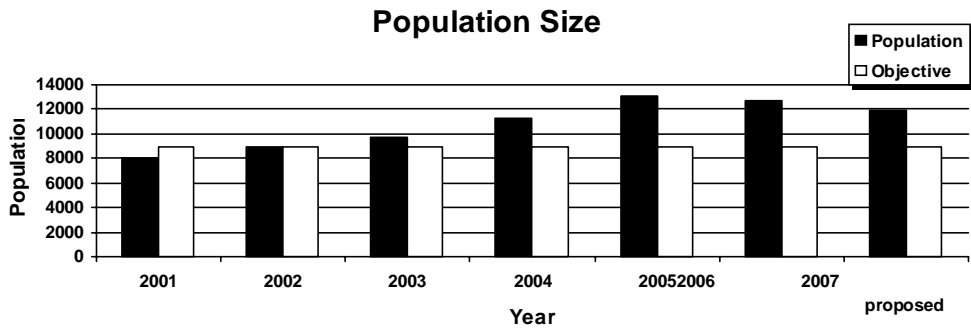
SPECIES : Pronghorn

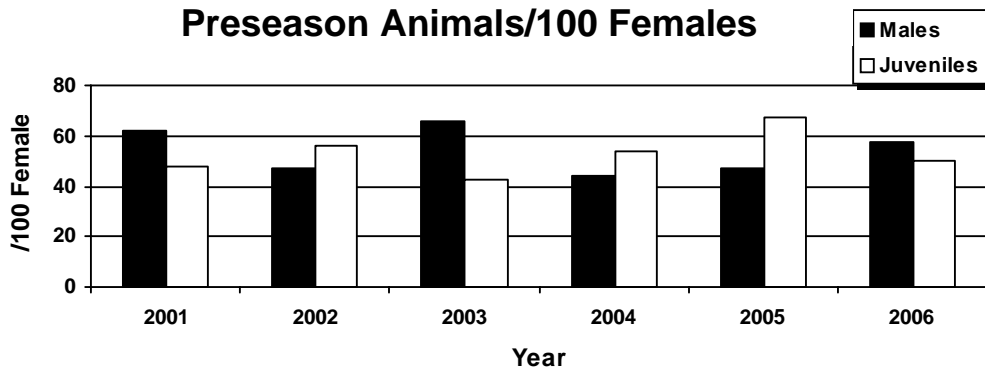
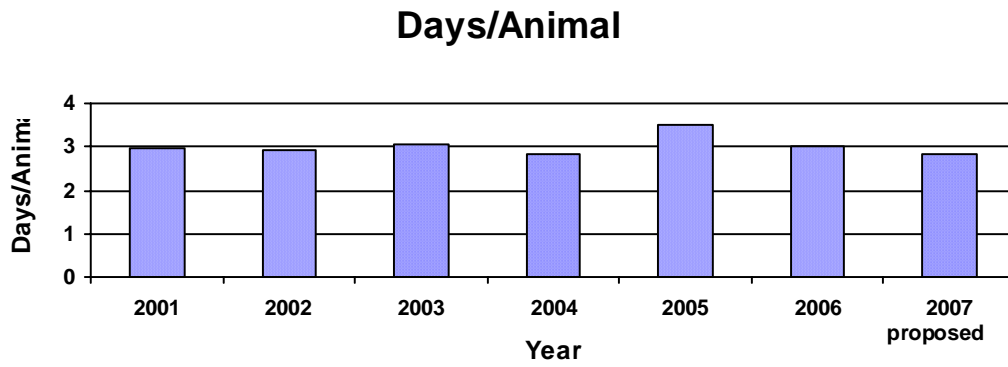
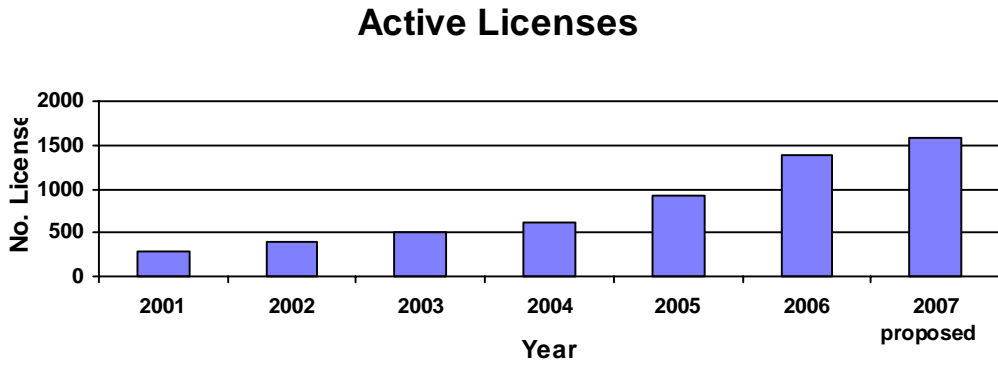
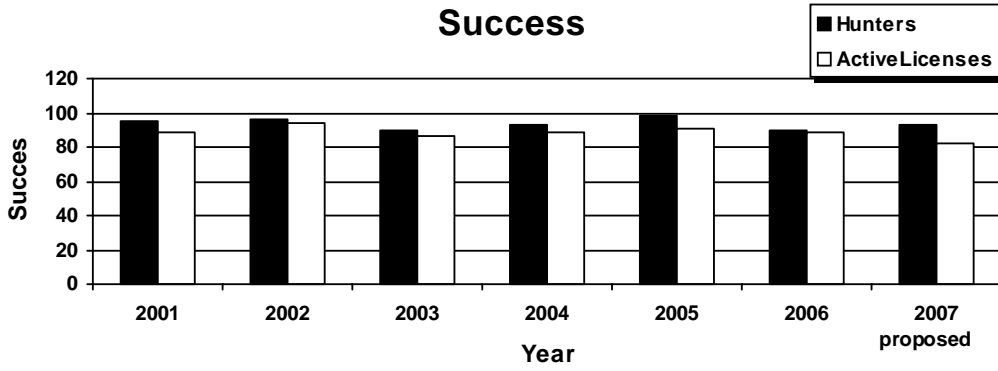
MODEL DATE : 5/15/07

HERD UNIT : BAGGS

YEAR : 2006

	Averages 2001 - 2005	2006	Proposed 2007	Objective
Population (Est.)	10,220	12,700	11,900	9,000
Harvest	487	1,220	1,300	
Hunters	513	1,352	1,400	
Hunter Success	94.9%	90.2%	92.9%	
Active Licenses	543	1,376	1575	
Active Licenses Success	89.7%	88.7%	82.5%	
Recreation Days	1,530	3,676	3,700	
Days/Animal	3.1	3.0	2.8	





## 2006 HUNTING SEASONS

SPECIES: PRONGHORN

HERD UNIT: BAGGS

HUNT AREA	TYPE	SEASON DATES	LIMITATIONS
53	1	09/20-10/14	Limited Quota; 550 licenses any antelope
<b>53</b>	<b>6</b>	<b>09/20-10/14</b>	<b>Limited Quota; 750 licenses doe or fawn</b>
	7	09/01-10/14	Limited Quota; 25 licenses doe or fawn, valid on private land.
<b>55</b>	<b>1</b>	<b>09/20-10/14</b>	<b>Limited Quota; 150 licenses any antelope</b>
<b>55</b>	<b>6</b>	<b>09/20-10/14</b>	<b>Limited quota; 100 licenses doe or fawn</b>
53,55	Archery	08/15	Refer to Section 3

# HARVEST REPORT

SPECIES : **Pronghorn**

HERD UNIT : **BAGGS**

YEAR : **2006**

PERIOD COVERED : 6/1/06-5/31/07

Prepared By : **TIM WOOLLEY**

Hunt Area	License Type	L.Q. Licenses	No. Hunters	Ylg. Males	Adult Males	Females	Juveniles	Total	Percent Success	Days Animal Taken
	<b>Resident</b>	630	570	0	338	145	2	485	85.1	3.8
<b>53</b>	<b>Non-Resident</b>	664	584	0	115	399	38	552	94.5	2.5
	<b>Total</b>	1,294	1,154	(1173)*	0	453	40	1,037	89.9 ( 88.4 )*	3.1
	<b>Resident</b>	163	128	0	86	32	0	118	92.2	2.7
<b>55</b>	<b>Non-Resident</b>	86	69	0	25	40	0	65	94.2	1.7
	<b>Total</b>	249	197	(203)*	0	111	0	183	92.9 ( 90.1 )*	2.3
	<b>Resident</b>	793	698	0	424	177	2	603	86.4	3.6
<b>Total</b>	<b>Non-Resident</b>	750	654	0	140	439	38	617	94.3	2.5
	<b>Total</b>	1,543	1,352	(1376)*	0	564	40	1,220	90.2 ( 88.7 )*	3.0

\* Active Licenses

# 2006 AGE STRUCTURE OF FIELD CHECKED ANIMALS

SPECIES : Pronghorn

PREPARED BY : TIM WOOLLEY

HERD UNIT : BAGGS

Hunt Area	Sex	Young	1+	2+	3+	4+	5+	6+	7+	Older	Unaged Adults	Total
53	Male	5	5	16	39	12	0	0	0	0	3	80
	Female	5	2	5	13	10	0	0	0	0	6	41
55	Male	0	0	1	7	0	0	0	0	0	2	10
	Female	0	0	0	0	0	0	0	0	0	0	0
Totals : Male		5	5	17	46	12	0	0	0	0	5	90
Totals : Female		5	2	5	13	10	0	0	0	0	6	41

\* Unaged animals older than yearlings

Total Aged : 131

## 2007 PROPOSED HUNTING SEASONS

SPECIES: PRONGHORN

HERD UNIT: BAGGS

HUNT AREA	TYPE	SEASON DATES	LIMITATIONS
53	1	09/20-10/14	Limited Quota; 550 licenses any antelope
53	6	09/20-10/14	Limited Quota; 750 licenses doe or fawn
	7	09/01-10/14	Limited <del>250</del> 250 licenses doe or fawn, valid on private land.
55	1	09/20-10/14	Limited Quota; 150 licenses any antelope
55	6	09/20-10/14	Limited quota; 100 licenses doe or fawn
53,55	Archery	08/15	Refer to Section 3

We propose no changes for 2007. This herd has a 2006 post season population estimate of about 12,700, and we anticipate it will drop to about 11,800 in 2007. The population objective for this herd is 9,000. One major complication for the estimation of this population is the potential interchange with pronghorns in HA 52 since there is no significant geographic boundary between the areas. The Baggs herd has had fair to good reproduction in recent years and has exhibited steady growth due to the better habitat and precipitation (in HA 53) compared to surrounding herds. Buck ratios in 2006 were about 58:100 up from 47:100 in 2005. Fawn ratios decreased from 67:100 in 2005, to 50:100 in 2006, and were the result of the drought conditions during 2006. The proposed harvest should move this herd towards objective in the next 3-4 years with the current level of production, and maintain buck ratios within Recreational guidelines (<60:100 does).

## KNOWN STUDIES IN THE HERD UNIT

- Ayers, L., S. Anderson, and F. Lindzey. 1997. Wildlife use of upland habitats on the Grizzly Wildlife Habitat Management Area in south-central Wyoming. Interim Progress report. Wyoming Cooperative Fish and Wildlife Research Unit, Univ. of Wyoming. 72pp.
- Cook J.G. and L.L. Irwin. 1984. Pronghorn winter ranges: habitat characteristics and a field test of a habitat suitability model. Department Zoology and Physiology, University of Wyoming, Laramie. 83 pp.
- Christiansen, T. 1990. A method for calculating mortality severity indices for population modeling using weather data. District 4 annual big game herd unit reports. Appendix A. Wyoming Game and Fish Department.
- Guenzel, R.J. 1986. Pronghorn ecology in south-central Wyoming. M.S. Thesis, Department of Zoology, University of Wyoming, Laramie. 347 pp.
- Irwin, L.L., R.J. Guenzel, and T.J. Ryder. 1980-81. Impact of coal mining activities on Pronghorn antelope in the Red Rim - China Butte area, Wyoming. Annual Reports. Department of Zoology and Physiology, University of Wyoming, Laramie.
- Irwin, L.L., R.J. Guenzel, and T.J. Ryder. 1981. Red Rim investigations, winter 1980-81. Department of Zoology and Physiology, University of Wyoming, Laramie. 119 pp.
- Irwin, L.L., R.J. Guenzel, and T.J. Ryder. 1984. Pronghorn-habitat relationships in the Red Rim area, south-central Wyoming. Department of Zoology and Physiology, University of Wyoming, Laramie. 212 pp.
- Nelson, R., G. Stout, L. Meyers, and R. Straw. 1994. Baggs mule deer crucial winter range analysis. Wyoming Game and Fish Department, Cheyenne. 72pp.
- Ryder, T.J., L.L. Irwin, and D.S. Moody. 1984. Wyoming's Red Rim controversy: history and current status. Pages 195-206 *in* Proceedings 11th Pronghorn Antelope Workshop. Corpus Christi, Texas.
- Severson, K.E. 1966. Grazing capacities and competition of pronghorn antelope and domestic sheep in Wyoming's Red Desert. Ph. D. Dissertation, Plant Sciences Division, University of Wyoming, Laramie. 119 pp.
- Taylor, E. 1971. Methods of forage sampling to determine food habits, forage requirements and carrying capacity for Pronghorn Antelope. FW-3-R-18. Wyoming Game and Fish Department. 58 pp.
- Wyoming Game and Fish Department. 1997. Little Snake River water management project. High Savery reservoir site. Fish and wildlife impacts analysis and proposed mitigation. 71pp.

Baggs antelope, 2000-2010  
Data from 1989 to 2010

Simulation from 2000 to 2010

Age Class	Init Pop.		Prop.		Presn		Mort%		Postsn		Mort%		Effort Set 1		Effort Set 2	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	2849.0	2849.0	50.0	50.0	35.0	35.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	671.0	671.0	2.0	2.0	7.0	7.0	0.70	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	434.0	452.0	2.0	2.0	7.0	5.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3	370.0	422.0	2.0	2.0	7.0	5.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4	277.0	401.0	2.0	2.0	7.0	5.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5	157.0	245.0	2.0	2.0	7.0	5.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	210.0	355.0	2.0	2.0	7.0	5.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
7	151.0	335.0	2.0	2.0	10.0	5.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8	97.0	209.0	2.0	2.0	20.0	10.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9	56.0	246.0	2.0	2.0	50.0	20.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10	20.0	201.0	2.0	2.0	75.0	30.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
11	6.0	143.0	2.0	3.0	100.0	40.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	1.0	91.0	2.0	5.0	100.0	50.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	0.0	50.0	5.0	7.0	100.0	75.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	0.0	16.0	7.0	7.0	100.0	100.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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Sum = 11985.0			Estimated Sum = 12500				Subadults: Ages 0 to 0									

Bio-Year	Preseason MSI	MSI Function is Linear			Postseason MSI	Effort & Wound Set Used
		Harvest Subadults#	Des. Pop Males#	Size in NA Females#		
1989	1.00	101	724	990	0.50	1
1990	1.00	62	566	967	0.60	1
1991	1.00	40	703	843	1.10	1
1992	1.00	124	1027	1382	2.00	1
1993	1.00	118	916	1303	0.90	1
1994	1.00	24	301	145	0.90	1
1995	1.00	0	326	0	0.90	1
1996	1.00	0	170	18	0.70	1
1997	1.53	7	128	40	0.70	1
1998	1.32	2	134	41	0.90	1
1999	1.27	2	211	19	0.60	1
2000	1.33	0	273	75	1.00	1
2001	1.38	4	199	40	0.40	1
2002	1.38	2	314	64	0.40	1
2003	1.44	7	386	47	0.20	1
2004	1.30	10	445	96	0.50	1
2005	1.10	22	504	319	0.80	1
2006	1.31	40	564	616	1.00	1
2007	1.35	25	565	750	1.00	1
2008	1.35	25	565	750	1.00	1
2009	1.35	25	565	750	1.00	1
2010	1.35	25	565	750	1.00	1
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Set 1	Wounding Loss	10.0%	10.0%	10.0%	Yearling Male	10.0%
Set 2	Wounding Loss	10.0%	10.0%	10.0%	Yearling Male	10.0%

Bio- Year	Young/100 Fems Age 1 - 1	Young/100 Fems Age 2 - 14	Young/100 Fems Disabled	Sex Ratio: 50 : 50
1990	0.0	180.0	0.0	
1991	0.0	180.0	0.0	
1992	0.0	180.0	0.0	
1993	0.0	180.0	0.0	
1994	0.0	180.0	0.0	
1995	0.0	180.0	0.0	
1996	0.0	180.0	0.0	
1997	0.0	180.0	0.0	
1998	0.0	180.0	0.0	
1999	0.0	180.0	0.0	
2000	0.0	180.0	0.0	
2001	0.0	180.0	0.0	
2002	0.0	180.0	0.0	
2003	0.0	180.0	0.0	
2004	0.0	180.0	0.0	
2005	0.0	180.0	0.0	
2006	0.0	180.0	0.0	
2007	0.0	180.0	0.0	
2008	0.0	180.0	0.0	
2009	0.0	180.0	0.0	
2010	0.0	180.0	0.0	
2011	0.0	180.0	0.0	

Table 1. Population Size During Bio-Year for A438-2007.GN1 06/01/2007 04:17 pm

Bio-Year	Start	Pre-Season	Post Season	End	%Growth
2000	12500	8363	7980	6641	1.6
2001	12703	8328	8061	7537	11.5
2002	14160	9369	8951	8342	10.6
2003	15666	10136	9652	9307	12.3
2004	17592	11946	11344	10308	9.2
2005	19205	14068	13149	11206	6.3
2006	20417	14075	12733	10694	-2.5
2007	19912	13392	11918	10068	-7.2
2008	18487	12525	11051	9360	-7.9
2009	17021	11592	10118	8569	-9.4
2010	15425	10561	9087	7688	-11.2

Table 3. Harvest Mortality for A438-2007.GN1 06/01/2007 04:17 pm

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	% of Pop
2000	0	273	75	348	4.2
2001	4	199	40	243	2.9
2002	2	314	64	380	4.1
2003	7	386	47	440	4.3
2004	10	445	92	547	4.6
2005	19	502	315	836	5.9
2006	40	564	616	1220	8.7
2007	25	565	750	1340	10.0
2008	25	565	750	1340	10.7
2009	25	565	750	1340	11.6
2010	25	565	750	1340	12.7

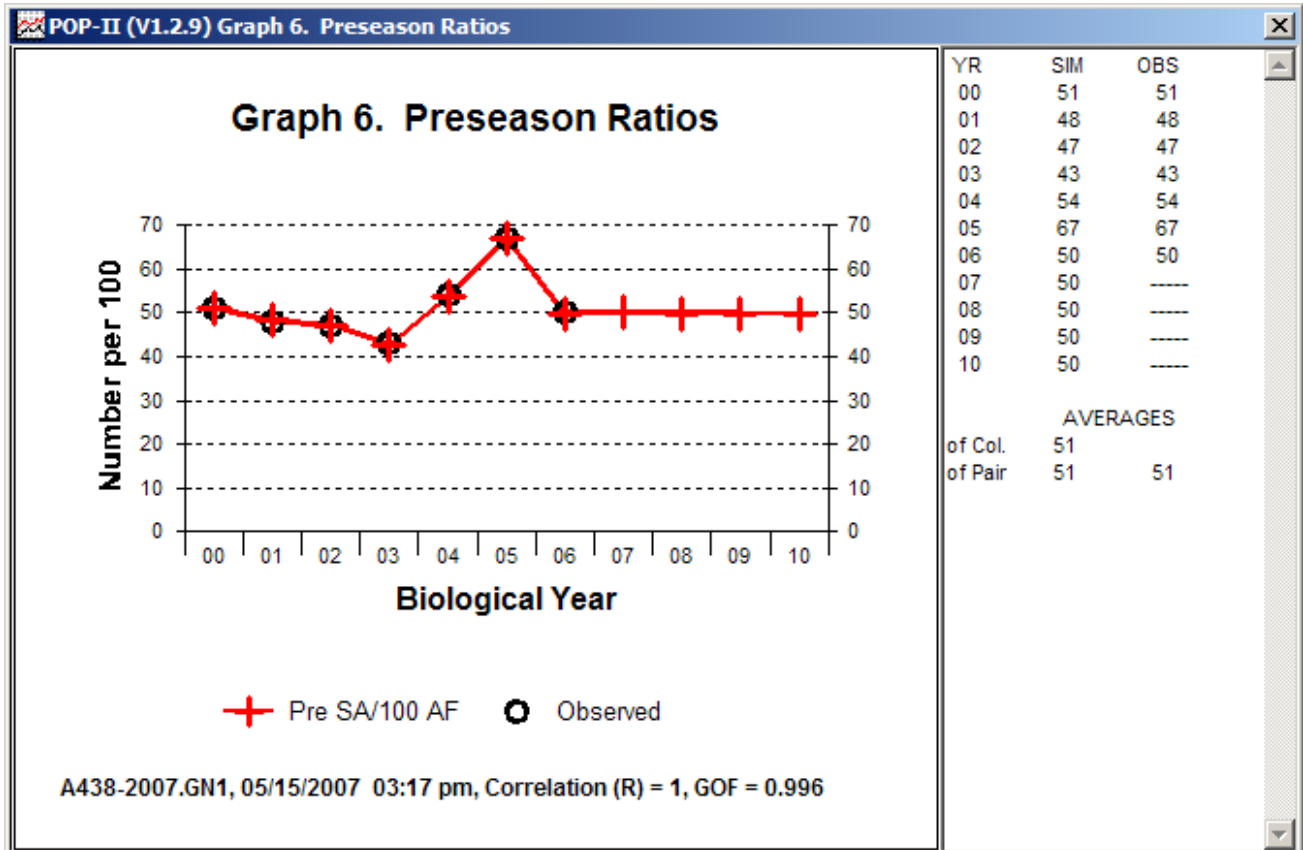
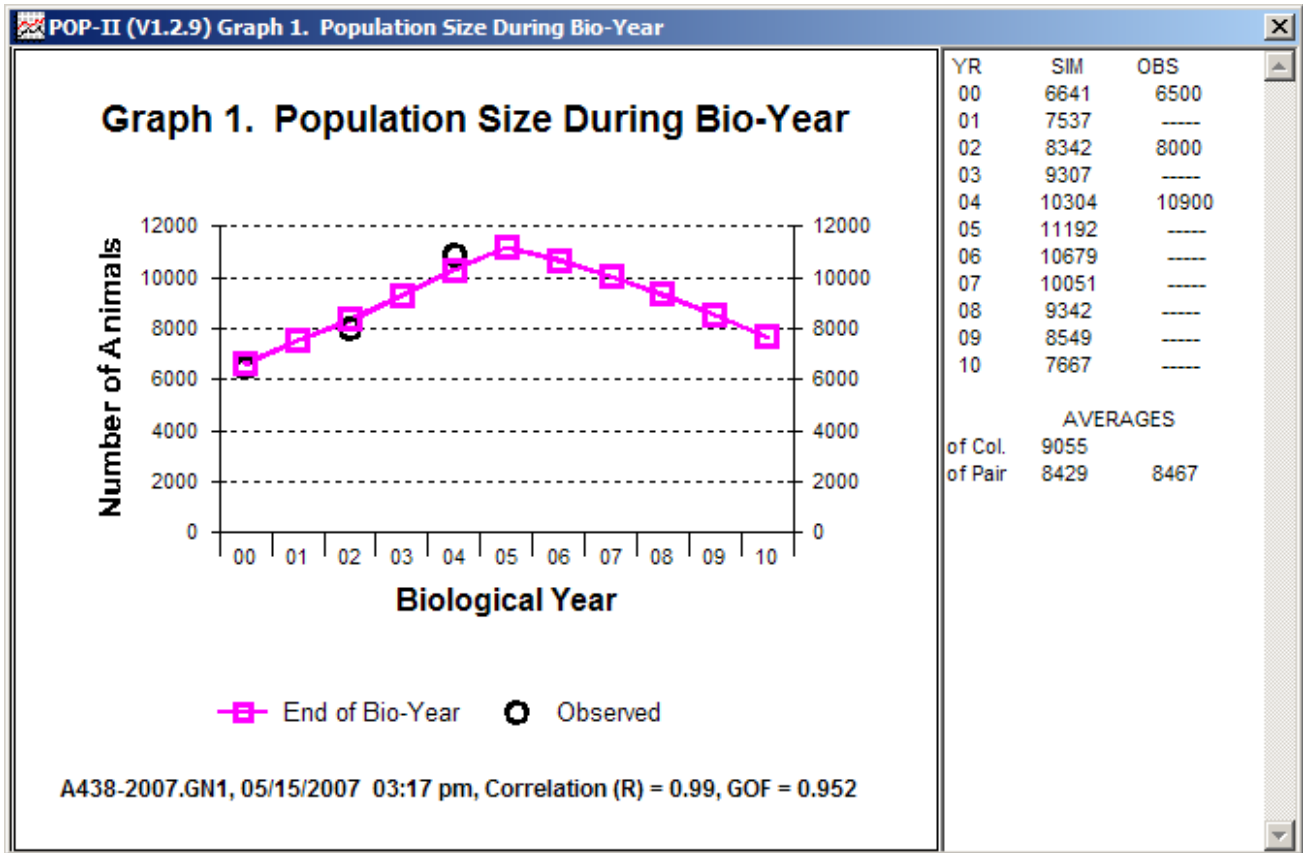
Table 4. Harvest Percentages for A438-2007.GN1 06/01/2007 04:17 pm

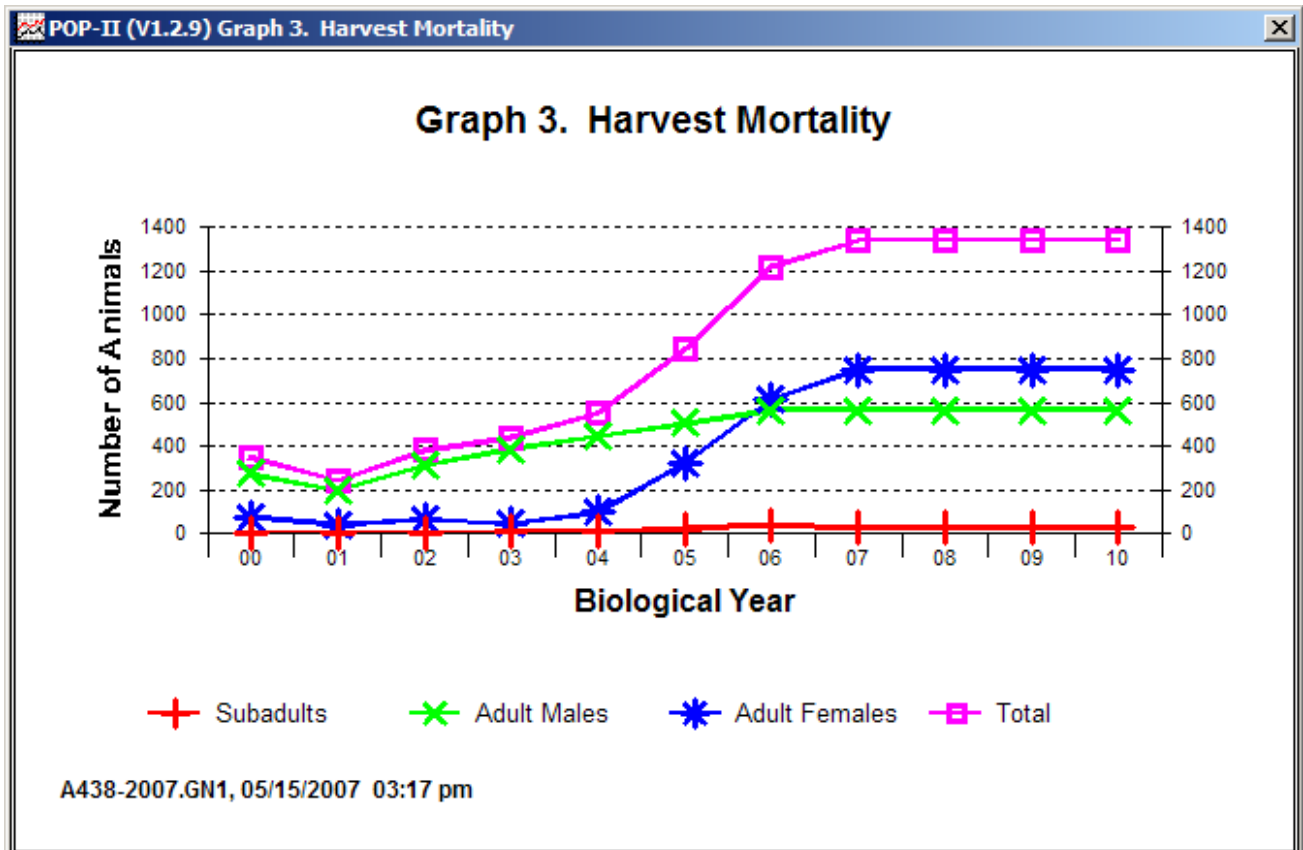
Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	Yearling Males
2000	0.0	11.0	1.9	4.16	20.9
2001	0.2	7.8	1.0	2.92	18.6
2002	0.1	10.6	1.5	4.06	20.1
2003	0.3	11.7	1.0	4.34	19.7
2004	0.3	12.2	1.7	4.58	19.2
2005	0.5	12.3	5.3	5.94	21.9
2006	1.3	12.4	9.7	8.67	23.8
2007	0.8	12.7	12.6	10.01	16.8
2008	0.9	13.1	13.7	10.70	16.3
2009	1.0	13.7	15.0	11.56	15.6
2010	1.1	14.7	16.7	12.69	15.1

Table 6. Preseason Ratios for A438-2007.GN1 06/01/2007 04:17 pm

Bio-Year	Subadults /100 1+F	2+ Males /100 1+F	Yr. Males /100 1+F	Ad Males /100 1+F
2000	51.2	46.5	17.5	64.0
2001	48.2	49.4	16.2	65.6
2002	47.2	50.2	18.0	68.2
2003	42.8	50.9	17.9	68.7

2004	53.8	50.7	17.2	67.9
2005	66.9	48.7	19.5	68.2
2006	49.9	49.3	21.9	71.2
2007	50.2	57.7	16.6	74.3
2008	49.9	61.4	17.1	78.5
2009	49.9	65.2	17.2	82.3
2010	49.7	68.6	17.4	86.0





PH438 - Baggs  
HA 53, 55  
Revised - 9/94

