CRITIQUE-SANFORD EVANS CO. LTD. DUCK DAMAGE SURVEY 1960.

By

W.J.D. Stephen

1961.

CANADIAN WILDLIFE SERVICE

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Table of contents \dbtext\Environment Canada\images\6025.bmp

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Critique - Sanford Evans Co. Ltd. Duck Damage Survey 1960

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W.J.D. Stephen

Sanford Evans Company Limited, 156 Lombard Avenue, Winnipeg, was given a contract to perform the following:

1. To prepare a questionnaire and submit it to 23,500 farmers.
2. To prepare duplicate mailing labels. One set to be affixed to envelopes, the other set to be sent to the Wildlife Service.
3. To conduct follow-up interviews of approximately 250 non-respondents.
4. To analyze all replies (estimated 7,000) and to prepare and submit to the Wildlife Service a detailed report of the findings of the survey and a statistical analysis thereof.

In late March, 1961 a single copy of the attached report was received at Saskatoon. Sanford Evans Co. Ltd. was asked to submit five copies of an improved report with details of sample sizes, and mean loss per damaged farm instead of per prairie farm. Two copies of the second edition of the Sanford Evans report were submitted to Ottawa in late April, 1961.

In early May 1961, an analysis of the distribution of replies to the questionnaire was begun. Discrepancies between the results indicated in the report and tabulations made from the data returned from Sanford Evans were discovered. Sanford Evans was requested to submit a supplementary report indicating how their results were derived and to furnish the remainder of questionnaires which were missing. Supplementary data sheets are attached. Eight positive follow-up questionnaires for Saskatchewan were sent over. Follow-up replies for Alberta are still missing.

An analysis of the raw data returned from Sanford Evans was made in Saskatoon. The results are given in Table 1. Table 2 shows results from the Sanford Evans report purported to represent the same statistics.

The observed discrepancies appear to be due to arithmetical errors and general carelessness on the part of Sanford Evans. Their expansion of the sample was inaccurate. Significant errors were introduced by the tenfold magnification of miscounts in the follow-ups.

.....2

Recommendation

1. Re-analyzed results should be used in publications referring to the 1960 prairie-wide duck damage survey.

2. Further contracts with Sanford Evans should be considered carefully to avoid repetition of such fiascoes.

W.J.D. Stephen,
Wildlife Biologist.

Saskatoon, Sask.
July 6th, 1961.

TABLE I: Tabulation of results of the 1960 prairie-wide duck damage survey as analyzed from questionnaires returned by Sanford Evans Co. Ltd.

C.W.S. Calculations from raw data supplied by Sanford Evans.

	Manitoba	Saskatchewan	Alberta	Prairies
1. No. in original mailing (3+2)	5,013	10,378	7,691	23,082
2. No. returned from Post Offices (by count)	7	8	10	25
3. No. farmers receiving questionnaire (5+6)	5,006	10,370	7,681	23,057
4. No. respondents (by count)	132	310	348	790
5. No. mail respondents reporting duck damage (by count)	54	173	230	457
6. No. non-respondents (by count)	4,874	10,060	7,333	22,267
7. No. follow-up phone calls (by count)	94	178	113*	385
8. No. follow-ups reporting duck damage (by count)	6	8	18**	32
9. Est. non-respondents with duck damage (8/7 x 6)	311	452	1,168	1,931
10. Est. total farmers in sample with damage (9+5)	365	625	1,398	2,388
11. No. farmers (1956 census)	48,308	103,391	79,424	231,123
12. Est. no. farmers damaged (10/3 x 11)	3,522	6,231	14,455	24,208
13. Est. % farmers damaged (12/11 x 100)	7.3%	6.0%	18.2%	10.4%
14. Mean value of loss ± standard error calculated from useable replies.	$241.±45.	$281.±32.	$302.±30.	$286.±20.

* Report made by W. Clark, C.W.S. Edmonton, indicated 113 calls completed. One hundred and eleven questionnaire forms returned by Sanford Evans.

** Report made by W. Clark, C.W.S. Edmonton, indicated 18 follow-ups reporting duck damage. Fourteen reported damage on follow-up questionnaire forms returned by Sanford Evans.

TABLE 2: Tabulations of results as reported by Sanford Evans Co. Ltd. in their report "Prairie Provinces Duck Damage Survey 1960."

	Manitoba	Saskatchewan	Manitoba	Prairies
1. No. in original mailing	*	*	*	23,000
2. No. returned from Post Office	*	*	*	*
3. No. farmers receiving questionnaire	*	*	*	*
4. No. mail respondents	*	*	*	775
5. No. mail respondents reporting duck damage	48	156	217	421
6. Est. no farmers represented by mail respondents reporting damage	480	1,560	2,170	*
7. No. non-respondents	4,788	9,928	7,509	22,225
8. No. follow-up phone calls	106	175	114	395
9. No. follow-ups reporting duck damage	5	8	10	23
10. Est. non-respondents with duck damage	2,020	3,960	5,016	*
11. Est. total farmers damaged	2,500	5,520	7,186	15,206
12. Est. % farmers damaged	5.0%	5.3%	9.0%	6.6%
13. Mean value of loss	$239.29	$250.74	$189.85	$220.09

* Data not supplied.

p.5

MANITOBA - NO. OF FARMS DAMAGED

C.D.	Mail Survey Reporting Damage	Projected Mult.by 10	Non-respondents	Phone Calls	Reporting Damage	Projected Mult. by 10	Total Damaged Farm
1	2	20	172	4	-	-	20
2	2	20	394	15	-	-	20
3	2	20	1,022	28	1	1/28x1,022=365	385
4	Nil	Nil	146	-	-	-	-
5	3	30	403	5	-	-	30
6	1	10	265	5	-	-	10
7	10	100	356	6	-	-	100
8	Nil	-	267	3	-	-	-
9	6	60	234	10	1	1/10x234=234	294
10	13	130	432	10	1	1/10x432=432	562
11	2	20	320	6	-	-	20
12	3	30	411	6	1	1/6x411=686	716
13	Nil	Nil	184	2	-	-	-
14	4	40	182	6	1	1/6x182=303	343
Province	48	480	4,788	106	5	2,020	2,500

SASKATCHEWAN - NO. OF FARMS DAMAGED

C.D.		Mail Survey Reporting Damage	Projected Mult. by 10	Non-Respondents	Phone Calls	Reporting Damage	Projected Mult. by 10	Total Damaged Farm
1		6	60	785	15	1	1/15x785=520	580
2		12	120	778	15	-	-	120
3		23	230	1,473	25	1	1/25x1,473=590	820
4		2	20	414	4	-	-	20
5		16	160	1,901	33	1	1/33x1,901=580	740
6		13	130	1,216	23	1	1/23x1,216=530	660
7		13	130	749	18	2	2/18x749=830	960
8		84	840	1,187	26	2	2/26x1,187=910	1,150
9		47	470	1,425	16	-	-	470
	Province	156	1,560	9,928	175	8	3,960	5,520

ALBERTA - NO. OF FARMS DAMAGED

C.D.	Mail Survey Reporting Damage	Projected Mult. by 10	Non-Respondents	Phone Calls	Reporting Damage	Projected Mult. by 10	Total Damaged Farm
1	8	80	428	2	-	-	80
2	21	210	909	22	4	4/22x909=1,653	1,863
3	9	90	803	20	1	1/20x803=401	491
4	69	690	1,581	27	4	4/27x1,581=2,342	3,032
5	28	280	1,553	25	1	1/25x1,553=620	900
6	66	660	1,321	6	-	-	660
7	16	160	914	12	-	-	160
Province	217	2,170	7,509	114	10	5016	7,186

MANITOBA - MAIL SURVEY

CROP DISTRICT	BUSHELS LOST			
	WHEAT	OATS	BARLEY	FLAX
1	575	-	200	-
2	-	350	-	-
3	-	-	500	-
4	-	-	-	-
5	330	320	200	-
6	-	-	500	-
7	1,650	310	-	-
8	-	-	-	-
9	1,325	100	1,270	-
10	1,015	550	2,050	-
11	200	150	260	-
12	500	100	600	100
13	-	-	-	-
14	2	242	35	-
PROVINCE	5,597	2,122	5,615	100

MANITOBA - PHONE CALLS

REPORTING DAMAGE

CROP DISTRICT	REPORTING DAMAGE	BUSHELS LOST		
		WHEAT	OATS	BARLEY
1	-	-	-	-
2	-	-	-	-
3	1	69	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	1	20	-	106
10	1	417	-	200
11	-	-	-	-
12	1	-	260	66
13	-	-	-	-
14	1	-	200	-
PROVINCE	5	506	460	372

SASKATCHEWAN - MAIL SURVEY

CROP DISTRICT	BUSHELS LOST			
	WHEAT	OATS	BARLEY	RYE
1	550	360	100	-
2	2,500	275	210	-
3	4,145	140	100	100
4	10	1	53	-
5	2,365	260	1,015	-
6	1,820	105	3,140	-
7	3,205	-	1,200	-
8	3,495	1,050	2,005	-
9	4,446	5,625	6,174	-
PROVINCE	22,536	7,816	13,997	100

P. 11

SASKATCHEWAN - PHONE CALLS REPORTING DAMAGE

CROP DISTRICT	REPORTING DAMAGE	BUSHELS LOST		
		WHEAT	OATS	BARLEY
1	1	50	-	-
2	-	-	-	-
3	1	400	-	-
4	-	-	-	-
5	1	-	200	-
6	1	-	2	-
7	2	825	-	-
8	2	350	-	175
9	-	-	-	-
PROVINCE	8	1,625	202	175

ALBERTA - MAIL SURVEY

CROP DISTRICT	BUSHELS LOST			
	WHEAT	OATS	BARLEY	RYE
1	1,000	350	1,195	-
2	5,130	1,155	1,940	300
3	405	300	1,715	25
4	10,620	6, 415	9,180	100
5	1,140	947	7,958	-
6	9,165	3,863	11,230	-
7	395	1,005	6,885	-
PROVINCE	27,855	14,035	40,103	425

ALBERTA - PHONE CALLS

REPORTING DAMAGE

CROP DISTRICT	REPORTING DAMAGE	BUSHELS LOST		
		WHEAT	OATS	BARLEY
1	-	-	-	-
2	4	225	-	380
3	1	300	-	-
4	4	-	85	500
5	1	30	-	-
6	-	-	-	-
7	-	-	-	-
PROVINCE	10	555	85	880

Stephen, W. J. Douglas
Critique - Sandford
Evans Co. Ltd. duck
damage survey 1960.

TITLE

DATE LOANED	BORROWER'S NAME