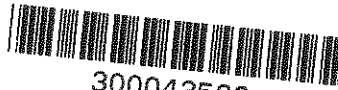


GAME HARVEST REPORT
AND
SUMMARY OF QUESTIONNAIRE
ANALYSIS

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(corrected 20 November 1975)



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INTRODUCTION

1974 was the second year in which the Game Branch attempted a comprehensive inquiry into the status of big game populations, harvest estimates and the determination of hunting pressure and hunter success rates.

At the end of the 1973 hunting season, each hunter was mailed a questionnaire. The percentage return was 33.5%. The most often stated reason for not returning a questionnaire in 1973 was that the hunter failed to receive one. For the 1974 season the Game Branch attempted to remedy this situation by providing the hunter with a questionnaire at the time he bought his licence. The 1974 resident hunter questionnaire return was 11%. Informal inquiries of hunters as to whether or not they had marked in their questionnaire resulted in the majority stating that they had lost or misplaced it during the hunting season. In order to get as high a return as possible, periodic notices were posted in the newspapers and on radio between 31 October 1974 and 1 February 1975, the cut-off date.

Because of the biased low percentage questionnaire return in 1974, the method of calculating the sport harvest of each big game species differs from the method used in 1973.

PROCEDURE

Of the 3536 resident hunters licensed in 1974, 387 or 11% returned their questionnaire. A comparison with the questionnaire results of 1973 reveals an obvious bias. A higher proportion of successful hunters submitted returns in 1974, thereby inflating success rates.

A large proportion of unsuccessful hunters did not submit returns.

HUNTER SUCCESS RATES

In attempting to put the data from the 1974 and 1973 returns on a common and comparative basis, a procedural error was noted in the computation of the 1973 hunter success rates. This was corrected and the more reliable hunter success rates of 1973, applied to 1974 data, form the basis of the 1974 harvest estimates. The corrected hunter success rates and revised harvest estimate for 1973 is presented in Table II. The revised 1973 harvest estimates differ only slightly from those published last year.

An examination of column (2) Table I indicates, particularly with moose and sheep, that the 1974 success rates from the questionnaire are unreasonably high.

In 1974, the Game Branch made a concerted Yukon-wide effort to examine every sheep, goat and grizzly skull taken during the open season. Total known kills of sheep are particularly accurate, perhaps within 5% of the actual legal kill. The 733 resident hunters holding sheep tags killed 56 known sheep for a success rate of 7.6%. This compares much more favourably with the 10.5% success rate of 1973.

TABLE I Comparison of 1973 and 1974 Resident Hunter Success Rates

| | (1) | (2) | (3) |
|------------|---------------------|--------------------------------------|--------------|
| Species | 1973(from Table II) | 1974 (from 11% questionnaire return) | Applied Rate |
| Moose | 33.8% | 56% | 33.8% |
| Caribou | 21 % | 24.8% | 21% |
| Sheep | 10.5% | 23% | 8% |
| Goat | 16.9% | 10% | 7% |
| Grizzly | 11.4% | 3.7% | 11.4% |
| Black Bear | 12.6% | 3.2% | 12.6% |

TABLE II Revised 1973 Harvest Estimates and Success Rates from the 1973 Questionnaire Return (n = 1195) (3568 total licence sales)

| Species | Tags | Kills | % Success | Total Tag Sales | Revised 1973 Harvest Estimate | Spe Pre |
|------------|------|-------|-----------|-----------------|-------------------------------|---------|
| Moose | 898 | 304 | 33.8% | 3193 | 1079 | 89 |
| Caribou | 476 | 100 | 21.0% | 1517 | 319 | 42 |
| Sheep | 239 | 25 | 10.5% | 706 | 74 | |
| Goat | 65 | 11 | 16.9% | 159 | 27 | 4 |
| Grizzly | 70 | 8 | 11.4% | 195 | 22 | 5 |
| Black Bear | 150 | 19 | 12.6% | 554 | 70 | 15 |

Table I shows the 1973 and 1974 hunter success rates on goat as 16.9% and 10% respectively. Both of these figures are biased in both years and high in view of our knowledge of the actual 1974 kill. Independent of the questionnaire of both years, resident hunters reported the kill of 17 and 6 goats in 1973 and 1974 respectively. In the former year 15 were killed in GMU #7 and in the latter year only 4 were killed in GMU #7.

Using the same procedure as was used in adjusting the 1974 success rate on sheep (known kill of 6/141 goat tags sold), the adjusted 1974 success rate on goat is 4.3%.

The discrepancy between the success rates of 16.9% and 10% for 1973 and 1974 respectively and the adjusted 4.3% is realistic in view of the rapid goat population decline in GMU #7. Hoefs (1972) remarked on this decline in his report on the 1972 game inventory for the area. While the outfitters operating in GMU #7 reported goat kills of 5 and 6 respectively for 1973 and 1974, they further note that markedly fewer goats are seen compared to five years ago. Brief surveys taken in 1973 and 1974 further document this rapid decline in goat numbers in GMU #7.

Similarly, the resident hunter success rates on caribou of 21% and 24.8% on caribou are probably high. While the actual 1974 caribou kill is unknown, the failure of the Porcupine herd to appear on the Dempster highway likely provided for a substantially lower kill than in 1973. The 1973 rate of 21% will be used.

In summary, for moose, caribou, grizzly and black bear, harvest estimates will be based on 1973 success rates because of the more reliable higher percentage questionnaire return. The 1974 harvest estimate of sheep and goat will be based on adjusted 1974 data, in view of our knowledge of the known kill and numbers of tags sold.

1974 RESIDENT HARVEST ESTIMATES

1974 resident hunter harvest estimates are presented in Table III. The goat harvest of 10 animals is a mean figure between extremes of 5 and 14 animals. The sheep harvest figure of 59, the range being 51 - 65. The caribou harvest level of 344 animals is high but we have no way of adjusting this figure.

TABLE III 1974 Resident Hunter Harvest Estimates
(3536 licence sales)

| Species | Hunter Success Rate | No. of Tags Sold | 1974 Harvest | Species Specific Pressure |
|------------|---------------------|------------------|--------------|---------------------------|
| Moose | 33.8% | 3437 | 1162 | 97% |
| Caribou | 21% | 1636 | 344 | 46% |
| Sheep | 8% | 733 | 59 | 20.7% |
| Goat | 7% | 141 | 10 | 3.9% |
| Grizzly | 11.4% | 206 | 24 | 5.8% |
| Black Bear | 12.6% | 567 | 71 | 16% |

HUNTING PRESSURE

Species specific pressure represents the percentage of the hunter population that hunted each species. A comparison of Tables II and III indicate that while the total number of Yukon hunters remained about the same for both years, more hunters bought moose, caribou and black bear tags in 1974. Species specific pressure remained the same on sheep and grizzly, while that on goat declined.

During the three-month open season: In August 186 contributing hunters spent 1065 man-days in pursuit of big game; September saw 276 contributing hunters afield for 1562 man-days, and in October 139 contributing hunters spent 643 man-days afield.

In 1974 the average number of days hunted per hunter in the three months was 6 days in each of August and September and 5 days in October.

DISCUSSION

The 1974 questionnaire, quantitatively and qualitatively was totally inadequate. Sample sizes of 10% have to be designed to be reliable. In order to get reliable data from voluntary questionnaire submissions, the recovery rate has to be much higher. As stated last year, we might try to improve the recovery of voluntary questionnaires by providing a worth-while incentive to the hunter, i.e. a draw for a high-quality rifle and scope. The only reasonable alternative is to design a random sample of 20% of the hunting population (600 hunters). The administration of such a plan is more complicated and office work loads are much higher.

BIG GAME TAKEN BY TRAPPERS

The segment of the big game harvest taken by trappers is predicted on the basis of success in the previous year, as the current licence is not surrendered until June of the valid year. This system seems to work well with all species except caribou. These animals, especially in the north, are migratory and patterns of movement vary from year to year.

Last year we averaged success rates on all species Yukon-wide, giving what appears to be an inflated estimate for 1973-74 derived from 72-73 success rates.

This years prediction of 1974-75 trapper big game harvests serves as a check on the estimate derived the year before. Based on 1972-73 data, the following levels of harvest were predicted for 1973-74. The figures in brackets are the estimates based on the data for the latter year, and represent the accepted harvest figures: Moose, 438 (301), Caribou, 1246 (1023), Black bear, 108 (30), Grizzly, 31 (8) and Sheep, 12 (6).

The figures in brackets were derived by the same method used last year, except that success rates were computed separately for those portions of the Yukon north and south of the Peel River. Table IV graphically represents the analysis of the 1973 - 74 General Licence Returns.

TABLE IV 1973 - 74 General Licence Affidavits

| | # | # | % | Moose | Caribou | Sheep | Grizzly | B1 B |
|---------------------|----------|----------|--------|-------|----------|-------|---------|---------|
| | Licences | Returned | Return | | | | | |
| South of Peel River | 335 | 231 | 68.9% | 258 | 131 | 6 | 6 | |
| Old Crow | 51 | 45 | 88.2% | 23 | 660 | - | 2 | |
| Ft. McPherson | 35 | 23 | 65.7% | 20 | 187 | - | - | |
| Aklavik | 61 | 8 | 13% | | 45 Known | | | |
| TOTALS: | 482 | | | 301 | 1023 | 6 | 8 | |

THE NON-RESIDENT HARVEST

The numbers of animals killed by non-resident hunters are not estimated. The kill figures represent the actual kill derived from reports submitted by the outfitter and the hunter. Table V graphically portrays the non-resident harvest.

| | # | | | | | | |
|-------------------------|---------|-------|---------|-------|------|---------|------------|
| | Hunters | Moose | Caribou | Sheep | Goat | Grizzly | Black Bear |
| Hunting with outfitters | 435 | 189 | 173 | 235 | 20 | 86 | 8 |
| Hunting with residents | 28 | 3 | 3 | 6 | - | - | - |
| TOTALS: | 463 | 192 | 176 | 241 | 20 | 86 | 8 |

A summary of the total big game harvest for all licence classes appears in Table VI.

| Licence Class | Moose | Caribou | Sheep | Goat | Grizzly | Black Bear |
|---------------|-------|---------|-------|------|---------|------------|
| 3536 Resident | 1162 | 344 | 59 | 10 | 24 | 71 |
| N-R (Guides) | 189 | 173 | 235 | 20 | 86 | 8 |
| N-R (Res.) | 3 | 3 | 6 | - | - | - |
| 482 | 301 | 1023 | 6 | - | 8 | 30 |
| TOTALS: | 1655 | 1543 | 306 | 30 | 118 | 109 |