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## The Point System Approach for the Harvesting of Ducks in Iowa

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*Iowa State Conservation Commission*

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# The Point System Approach for the Harvesting of Ducks in Iowa<sup>1</sup>

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SYNOPSIS: Under this system, different species and sexes of ducks were assigned various point values. The daily bag limit was reached when the point value of the last duck taken, added to the sum of the point values of the other birds already bagged during that day, reached or exceeded 100 points. The point system differs from past conventional regulations by freeing the hunter from the necessity of correctly identifying each duck before shooting in order to remain legal. This system was first tested in Colorado in 1968 and since has been tried on an experimental

basis in several states. Hunter opinion was highly favorable and hunter observation data indicated major compliance with the regulations. Hunters tended to select mallard drakes and avoided shooting at hen mallards and wood ducks. The point system regulations were more restrictive than the conventional regulations permitted elsewhere in the flyway. Seasons operating under point system regulations had fewer problems associated with them than were experienced under conventional species oriented regulations and offered more flexibility and enjoyment to the hunter.

INDEX DESCRIPTORS: Waterfowl, Point System, Duck Season Regulations, Duck Harvest.

The point system is a somewhat new approach for regulating the harvest of waterfowl. This system was first tested in 1968 in the San Luis Valley of Colorado. In 1969 it was conducted on an experimental basis in additional states in the Central Flyway and at the Shiawassee State Game Management Area in Michigan. The point system was so well received by hunters and professionals alike that it was expanded in 1970 to include 2 states in both the Mississippi and Atlantic Flyways and was offered to all the Central Flyway states (Geis, 1971).

Iowa and Illinois were selected from the Mississippi Flyway and New Jersey and Florida were chosen from the Atlantic Flyway. All states in the Central Flyway except North Dakota and Kansas selected the point system.

This method of regulating harvest is another approach to species management. Since 1934 this concept has been used to reduce or increase the harvest on bufflehead (*Glaucionetta albeola*), canvasback (*Aythya valisineria*), ruddy duck (*Oxyura jamaicensis*), redhead (*Aythya americana*), wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), pintail (*Anas acuta*), widgeon (*Mareca americana*), hooded merganser (*Lophodytes cucullatus*), black duck (*Anas rubripes*), lesser scaup (*Aythya affinis*) and even blue-winged teal (*Anas discors*). These various restrictions or bonus seasons have all had their drawbacks as well as their advantages but the data consistently suggest the necessity of species management regulations to properly manage the waterfowl resource.

Conventional species management regulations require that hunters identify ducks on the wing before shooting to avoid the possibility of violation. The point system offers the large advantage in that the hunter need only identify the duck in the hand to remain legal.

Under the point system different species, and in some cases sexes of a given species, are assigned various point values up to 100 points. In 1970 point categories were set

at 90, 20 and 10 points. The 90 point ducks were female mallard, black duck, wood duck, redhead, canvasback and hooded merganser; 20 point ducks were drake mallard, hen pintail and ringneck duck (*Aythya collaris*); 10 point ducks were drake pintail, gadwall (*Anas strepera*), widgeon, shoveller (*Spatula clypeata*), green-winged teal (*Anas carolinensis*), blue-winged teal, scaup, goldeneye (*Glaucionetta clangula americana*) and all others. In 1971 the only change was that canvasbacks and redheads were increased from 90 to 100 points. The daily bag limit was reached when the point value of the last duck taken added to the sum of the point values of other ducks already bagged during that day reached or exceeded 100 points.

Ducks in relative short supply and in need of protection were assigned high point values; more abundant species were assigned lower point values.

This paper deals with the critical evaluation of this system as a method of harvesting ducks.

The collection of data and evaluation of these data presented here were made possible only through extreme effort and cooperation extended by Iowa management and research biologists, Iowa conservation officers, biologists from other point system states, and personnel from the Migratory Bird Population Station at Laurel, Maryland. I would like to extend my appreciation to Drs. Al Geis, Vern Wright, and Gene Klönglan for editing the manuscript.

## METHODS

Prior to the 1970 season opening an education program was conducted by the Information and Education Section and the Fish and Game Division of the Iowa Conservation Commission. Species identification information was given to 7,959 hunters at 121 meetings all over Iowa. Point allocation cards and black and white species identification sheets of 90 and 20 point ducks were distributed.

A Hunter Performance Survey was conducted by the Wildlife Section of the State Conservation Commission to record hunter behavior and violations. These surveys consisted of trained observers watching a hunting party and recording all of their activities. The technique is described by Martinson, et al. (1966).

<sup>1</sup> This project was conducted as part of a research program on waterfowl in the Wildlife Section of the State Conservation Commission. Funds were provided from hunting and fishing license fees.

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TABLE 1. HUNTER PERFORMANCE SURVEY DATA

	A*		B*		C*		Totals	
	1970	1971	1970	1971	1970	1971	1970	1971
No. Observations	34	42	154	108	91	106	279	256
No. Hunters	68	81	283	217	199	233	550	531
Av. No. Hunters/Party	2.0	1.9	1.8	2.0	2.2	2.2	2.0	2.1
Hours of Observations	55	93	389	292	329	402	772	787
Man Hours of Observations	144	195	705	593	705	926	1,554	1,714
No. Complete Hunts	24	33	116	88	80	88	220	209
Shots Fired	0	0	826	557	1,848	2,311	2,674	2,826
Ducks Downed Directly	0	0	132	108	345	413	477	521
Ducks Sailed	0	0	31	13	81	117	112	130
Found and Discarded	0	0	0	2	0	4	0	6
Not Searched for	0	0	10	2	38	54	48	56
Dog Used	9	4	24	23	20	18	53	45

A\*—Observations with 0 flights of ducks.  
 B\*—Observations with 4 or fewer flights of ducks.  
 C\*—Observations with 5 or more flights of ducks.

The number and kinds of ducks harvested in Iowa was determined from the mail kill questionnaire survey of waterfowl hunters and waterfowl wing surveys conducted annually by the Bureau of Sports Fisheries and Wildlife.

A hunter opinion questionnaire was sent to 400 Iowa waterfowl hunters to obtain data on public acceptance of this new system. The procedure for this survey is described by Geis (1971).

Hunter bag checks and duck identification checks were made by Fish and Game personnel across the state; hours hunted, number and species killed were recorded.

RESULTS AND DISCUSSION

*Hunter Performance Survey*

Hunter observation data were collected on 220 complete hunts in 1970 and 209 complete hunts in 1971 for a total of 3,268 man hours of observations. Table 1 presents additional data from the spy blind reports. In 1970 Iowa collected the largest number of hunter observations of any state and these data probably present as accurate a picture as is available.

*Hunter Selectivity*

To evaluate the success of directing hunting pressure toward the low point species and away from the high point birds, spy blind observations were designed to record all flights of ducks by species that passed within range of the party. Data were also recorded on shots fired per flight and birds knocked down. These data are presented in Table 2.

The composition of all flights that were identified by species in 1970 indicated that 16.4 percent, 13.0 percent and 37.3 percent were 90 point, 20 point and 10 point ducks respectively. Mallards of unknown sex made up 28.3 percent of the flights.

It was interesting to note that in 1970 the percentage of flights of 90 point ducks that were fired upon (69%) was significantly lower than 20 point ducks (95%) or 10 point ducks (81%). Data from 1971 was slightly lower but paralleled that of 1970.

Drake mallards were fired upon at a much higher rate than were hen mallards. Wood ducks were shot at a lower rate than any other species except hen mallards. Redheads and canvasbacks, however, were fired upon at a relatively high rate even though they were high point birds.

Ducks downed per opportunity gives a more accurate picture of the actual kill rate of the different species. Twenty point ducks, mainly drake mallards, experienced almost twice the kill rate as did 90 point ducks in 1970. Hen mallards were shot down at slightly more than one-half the rate as were drakes. This did not hold true in 1971, however, when hens were downed at a higher rate than were drakes.

These data suggest that 90 point birds were shot at a lower rate than 20 or 10 point birds in 1970 and at the same rate as 20 point birds in 1971. Wood ducks were killed at a much lower rate than any other species. Geis and Crissey (1973) reported that in most states shooting pressure on 90 point ducks was reduced compared to other ducks. They also noted a marked selection for drake mallards over hen mallards, a reduction in the wood duck kill in some areas and no particular attempt to select 10 point ducks. Kimball et al. (1971) pointed out for all states testing the point system that values for ducks downed per opportunity were considerably higher for 10 and 20 point ducks (.68) than for 90 point birds (.45).

Hunter selectivity in Michigan strongly influenced the sex ratios in the kill according to Mikula et al. (1972). He reported mallard sex ratios in flight of 1.61 drakes per hen compared to 2.77 drakes per hen observed knocked down.

Comparing data from the point system to a fixed two bird limit Mikula et al. (1972) found a sex ratio in the kill of 1.31 drakes per hen under fixed bag regulations compared to 1.18 drakes per hen observed in flight. Geis and Crissey (1973) reviewed data collected from 1965 through 1969 for the same states that tested the point system and found that ducks downed per opportunity was nearly the same for high point and low point ducks. They believe that the lack of difference between the two groups during the early years reinforce the conclusion that the difference observed in 1970 between 90 point ducks and 10 and 20 point ducks was the result of the point system regulations.

TABLE 2. COMPOSITION OF OPPORTUNITIES,<sup>1</sup> THE PERCENT OF OPPORTUNITIES SHOT AT AND DUCKS DOWNED PER OPPORTUNITY OBSERVED IN THE POINT SYSTEM<sup>2</sup>

Species	Percent of All Flights		Percent Opportunities That Were Shot At		Ducks Downed Per Opportunity	
	1970	1971	1970	1971	1970	1971
Redhead	— <sup>3</sup>	—	—	—	—	—
Canvasback	—	—	—	—	—	—
All 100 Pt. Ducks	1.0	1.0	82.0	61.5	0.73	0.54
Female Mallard	6.8	6.6	62.0	72.0	0.30	0.50
Wood Duck	8.3	6.5	73.0	59.0	0.24	0.33
Black Duck	0.1	0.1	—	—	—	—
Hooded Merganser	0.2	0.1	—	—	—	—
All 90 Pt. Ducks	15.4	13.3	69.0 <sup>4</sup> †	66.0 <sup>4</sup> †	0.30 <sup>4</sup> †	0.42 <sup>4</sup> †
Male Mallards	11.8	13.2	94.0 <sup>4</sup> †	87.0 <sup>4</sup> †	0.51 <sup>4</sup> †	0.39 <sup>4</sup> †
Ring-Necked Duck	1.1	0.6	100.0	—	1.00	—
Female Pintail	0.1	0.1	—	—	—	—
All 20 Pt. Ducks	13.0	13.9	95.0 <sup>4</sup> †	87.0 <sup>4</sup> †	0.55 <sup>4</sup> †	0.41 <sup>4</sup> †
Male Pintail	0.2	0.4	—	—	—	—
Gadwall	1.5	2.5	88.0	96.0	0.82	0.92
Widgeon	5.3	3.7	82.0	69.0	0.53	0.47
BWT	16.2	22.5	78.0	79.0 <sup>4</sup> †	0.40 <sup>4</sup> †	0.45
CWT	9.3	5.3	79.0	71.0	0.54 <sup>4</sup> †	0.47 <sup>4</sup> †
Unknown Teal	1.1	3.4	92.0	67.0	0.46	0.33
Shoveller	1.3	0.2	93.0	50.0	—	—
Scaup	1.9	5.4	91.0	81.0	0.45	0.60
Others	0.4	0.9	—	—	—	—
All 10 Pt. Ducks	37.3	45.1	81.0 <sup>4</sup> †	77.0 <sup>4</sup> †	0.49 <sup>4</sup> †	0.49 <sup>4</sup> †
Mallard—Unknown	28.3	24.8	—	—	—	—
All Mallards	46.9	44.5	85.0 <sup>4</sup> †	84.0 <sup>4</sup> †	0.46 <sup>4</sup> †	0.46 <sup>4</sup> †
All Pintails	5.3	2.5	97.0	88.0	0.48	0.58

<sup>1</sup> An opportunity is a flight of one or more ducks, of a single species (or sex, when applicable) recorded as within range of the hunter or fired upon.

<sup>2</sup> Data from Migratory Bird Pop. Sta. Admin. Repts. 206 and 215.

<sup>3</sup> Insufficient data; results are included in totals but not shown here.

<sup>4</sup> † Indicates that the value shown was based on 100 or more opportunities.

TABLE 3. SPECIES COMPOSITION OF IOWA'S DUCK KILL  
FEDERAL WING COLLECTION DATA<sup>1</sup>

#### Species Composition

Species composition of Iowa's duck harvest from 1968 through 1971 is shown in Table 3 (Kimball et al. 1972). Very little change is noted between the percentages of each point class from 1968 through 1971. The percentage of hen mallards in the kill declined 7.3 percent while the importance of drake mallards dropped only one percent from 1969 to 1970. At the same time teal increased in the bag 7.3 percent and wood ducks increased 1.6 percent.

The changes in the timing of seasons in Iowa make it difficult to use species composition of the kill to reflect the effectiveness of regulations. An earlier season in Iowa tends to catch the early migrating species and the percentage of wood ducks and blue-winged teal in the kill increases. The 1968 and 1969 seasons were 25 days shorter than in 1970 and the 1970 season opened 23 and 22 days earlier than in 1968 and 1969 respectively. The increase in the importance of wood ducks in 1970 even with the high point allocation was not surprising. It was anticipated that a much larger wood duck kill would result from the earlier season.

The effects of the point system can best be shown by examining the species composition in the kill of blue-winged teal and wood ducks for 1968 through 1971. The percentage of blue-winged teal in the bag in 1970 and 1971 was more than twice the average for 1968 and 1969 while the relative importance of wood ducks remained virtually unchanged

Species	Year			
	1968	1969	1970	1971
Redhead	0.9	1.8	1.1	1.0
Canvasback	0.0	0.7	0.6	0.5
Hen Mallard	13.6	19.8	12.5	14.1
Black Duck	0.5	0.8	0.4	0.3
Wood Duck	15.9	12.6	14.2	16.0
Hooded Merganser	0.0	0.1	0.2	0.3
Total 90 and 100 Pt. Ducks	30.9	35.8	29.0	30.7
Drake Mallard	28.4	26.6	25.6	29.3
Hen Pintail	1.1	0.9	1.1	0.3
Ring-Necked Duck	2.4	1.2	2.7	1.5
Total 20 Pt. Ducks	31.9	28.7	29.4	31.1
Gadwall	4.4	3.3	3.2	4.0
Widgeon	5.3	6.0	5.2	3.9
Green-Winged Teal	21.1	9.5	12.0	7.1
Blue-Winged Teal	1.1	6.9	14.2	13.4
Shoveller	1.1	1.8	1.6	1.7
Drake Pintail	1.1	2.1	2.3	1.3
Greater Scaup	0.4	0.1	0.1	0.2
Lesser Scaup	2.0	4.1	2.3	4.5
Goldeneye	0.4	0.0	0.0	0.1
Bufflehead	0.4	0.8	0.3	0.2
Ruddy Duck	0.0	0.7	0.4	0.7
Others	0.0	0.1	0.1	0.0
Total 10 Pt. Ducks	37.3	35.4	41.7	37.1
All Mallards	42.0	46.3	38.1	43.4
All Pintails	2.2	3.0	3.4	1.6

<sup>1</sup> Data from Kimball et al., 1972.

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TABLE 4. SIZE OF IOWA'S DUCK HARVEST IN 1968, 1969, 1970, AND 1971<sup>1</sup>

Year	90 and 100 Point Ducks		Total	20 Point Ducks		10 Point Ducks Total	Total Ducks	No. Duck Stamps Sold	Length of Season Days
	Hen Mallard	Wood Duck		Drake Mallard	Total				
1968	17,800	20,988	40,636	37,380	42,000	49,368	132,000	45,180	30
1969	55,350	41,063	116,341	86,689	95,533	115,368	325,900	54,330	30
1970	64,528	62,878	129,298	113,357	130,183	183,320	442,800	65,240	55
1971	70,387	79,872	153,254	146,266	155,251	185,203	499,200	67,490	50
PERCENT CHANGE									
1968-1969	+262.5	+95.6	+186.3	+131.9	+122.6	+133.6	+146.8	+20.2	0
PERCENT CHANGE									
1969-1970	+ 16.5	+53.1	+ 11.1	+ 30.7	+ 39.1	+ 58.9	+ 35.8	+20.0	+83
PERCENT CHANGE									
1970-1971	+ 8.3	+21.3	+ 15.7	+ 22.5	+ 16.2	+ 1.1	+ 11.3	+ 3.3	-9.1

<sup>1</sup> Data from Migratory Bird Pop. Sta. Admin. Repts. 185, 186, 201 and 202.

in 1970 and 1971 compared to earlier years. Although the striking difference in season dates complicates the interpretation of species composition data, these data do indicate that the point system did influence the kill of wood ducks.

*Harvest Characteristics*

Season length, bag limits and waterfowl migrations play a significant role in the total waterfowl harvest in Iowa. An increase of 147 percent in the total duck harvest resulted from 1968 to 1969. The season length and dates were the same but the mallard limit was increased from one to two and a better migration occurred across Iowa. In addition, hunter numbers increased 20 percent.

Increases in the kill from 1969 to 1970 were not nearly as spectacular even with more liberal bag limits, and 83 percent longer seasons and 20 percent more hunters (Table 4). The kill of hen mallards increased by 16.5 percent while the kill of drake mallards climbed 30.7 percent. The total harvest for Iowa in 1970 increased 35.8 percent while Missouri's harvest increased 41.8 percent and in Arkansas 118.8 percent more ducks were killed (Croft, 1971). Additional states in the Mississippi Flyway increased their kill under conventional regulations. The Central Flyway states experienced similar situations. Geis and Crissey (1973) reported that while North Dakota experienced a 14 percent decline in harvest under conventional regulations, South Dakota shooting under the point system had a decline of 21 percent. The duck harvest in Kansas increased 26 percent while the adjacent point system states of Nebraska and Oklahoma experienced a 14 percent and 13 percent increase respectively.

Total harvest estimates made for the Shiawassee Area in Michigan by Mikula et al. (1972) indicated that the harvest would have been greatest under a two bird bag limit. State-wide regulations yielded a harvest estimate slightly less than under the point system. However, state-wide regulations consisted of one mallard per day limit compared to 1-3 mallards a day under the point system.

These data indicate that the point system tested in 1970 and 1971 was no more liberal and possibly more restrictive than other regulations permitted in non-test states. Iowa's two most important ducks in the bag are mallards and wood ducks. They also are two of the most abundant species in Iowa. Under the point system wood ducks and hen mallards are high point ducks, which in many cases results in a two

duck limit.

In comparison, under conventional regulations, Iowa could have selected a 6 duck limit providing two were teal, for the first 9 days of the season. The limit could have consisted of 2 wood ducks or 4 mallards with no restriction as to sex. For the rest of the season a basic 4 bird bag with no restrictions on mallards, could have been offered, thus allowing a 4 mallard bag compared to a mallard bag of between 2 and 5 depending on the sex and order taken under the point system. All indications point toward the fact that the point system is more restrictive.

*Hunter Success*

Bag checks on the complete hunts of 5,282 hunters in 1970 and 4,909 hunters in 1971 provided data for Table 5 on number of ducks bagged per hunter per party and point values obtained per hunter. In 1970, 75 percent of the hunters and 73 percent of the parties checked had less than 2 ducks per man and 89 percent of the hunters and 88 percent of the parties averaged 90 points or less per man per party. Only 10.5 percent of the hunters achieved 100 or more points. Many of the parties that had 100 points or over had bags that consisted of two ducks. Numerous parties were observed leaving the marsh with their point limit which was two ducks. Hunters and parties achieving less than 100 points per man would have little reason to discard high point ducks and no need to reorder. This group of hunters comprised 89 percent of the duck hunters checked. Data from 1971 were almost identical. These data are complicated by a sampling bias which was the result of heavier sampling earlier in the season.

It is interesting to compare the number of hunters that bagged 4 ducks or more under the point system to a basic 4 bird bag limit offered in other states. In 1970 and 1971, 93.8 and 93.2 percent, respectively, of Iowa hunters shot less than 4 ducks per trip. This leaves about 6 percent of our hunting trips which benefited directly from the more liberal appearing regulations of the point system.

Another noteworthy aspect is that fewer 4-bird bags were obtained because many bag limits consisted of two high point ducks or one high point duck and one other. Under the 4-bird limit, hunters were not penalized for shooting hen mallards or wood ducks. Under the conditions that existed in Iowa this would have been a liberalization.

TABLE 5. DAILY HUNTER SUCCESS<sup>1</sup>

	1970	1971
No. of Hunters	5,282	4,909
No. of Parties	2,298	2,184
No. of Hunters/Party	2.3	2.2
% of Hunters Bagging No Ducks	26.4	26.0
% of Parties Bagging No Ducks	29.1	29.3
% of Hunters Av. Less Than 1 Duck/Man/Party	48.8	47.6
% of Parties Av. Less Than 1 Duck/Man/Party	47.2	45.7
% of Hunters Av. Less Than 2 Ducks/Man/Party	74.9	70.3
% of Parties Av. Less Than 2 Ducks/Man/Party	72.9	69.5
% of Hunters Av. Less Than 3 Ducks/Man/Party	87.9	86.3
% of Parties Av. Less Than 3 Ducks/Man/Party	87.0	85.6
% of Hunters Av. Less Than 4 Ducks/Man/Party	93.8	93.2
% of Parties Av. Less Than 4 Ducks/Man/Party	93.1	92.4
% of Hunters Av. Less Than 5 Ducks/Man/Party	96.6	96.2
% of Parties Av. Less Than 5 Ducks/Man/Party	96.1	95.7
% of Hunters Av. Less Than 90 Points/Man/Party	84.0	84.5
% of Parties Av. Less Than 90 Points/Man/Party	82.0	82.5
% of Hunters Av. 90 Points/Man/Party	5.2	4.0
% of Parties Av. 90 Points/Man/Party	6.0	5.0
% of Hunters Av. 100 Points/Man/Party	2.5	2.2
% of Parties Av. 100 Points/Man/Party	3.1	2.5
% of Hunters Av. Over 100 Points/Man/Party	8.0	8.9
% of Parties Av. Over 100 Points/Man/Party	8.6	9.7

<sup>1</sup> Data obtained from bag checks of complete hunts only.

### Enforcement

The major criticism of the point system centers around two points (1) reordering and (2) discarding high point birds. Both of these objections are enforcement problems.

Hunter performance observations provide data to evaluate the potential for daily bag limit violations and for reordering. Only 1.1 percent of 265 parties violated the daily bag limit. Only an additional 3 percent of the parties would have needed to reorder to remain legal (Kimball et al. 1971). If we assume that hunters did in fact reorder in all instances where reordering was possible we increase this to 4.1 percent of the total hunters. Geis and Crissey (1973) looked at data from all 12 states testing the point system and found that of 1,153 hunting parties only 3.4 percent violated the daily bag limit. The proportion of the total parties reordering would only increase 2.5 percent if it is assumed that when the order of take was not known in apparently legal bags the highest point birds were always taken first.

In 88 percent of 2,298 party bag checks in 1970, Iowa hunters would not have needed to reorder to remain legal. All the data gathered from Iowa and the other 11 states testing the point system suggest that the incidence of reordering and the potential of reordering is extremely low.

Discarding high point birds has not been considered a problem in Iowa. Only a few cases have been recorded during hunter observations or by Iowa enforcement officers. High point birds, with the exception of the hooded merganser, are highly prized ducks. Reviewing hunter success data, few hunters needed to discard a high point bird to go on shooting. No doubt some high point birds shot by mistake are reordered and taken home in a legal appearing bag.

Data from the 12 states testing the point system show that hunters failed to retrieve 20.7 percent of 90 point ducks compared to 11.7 and 13.2 percent of the 20 and 10 point ducks, respectively (Kimball et al. 1972). Hunters failed to retrieve 15.9 percent of the female mallards compared to 9.9

percent of the drake mallards. Statistically, this difference is highly significant.

At present this system appears to have fewer enforcement drawbacks than seasons held in the past. In a questionnaire to 60 Iowa officers, 80 percent favored the point system over other regulations.

### Species Identification

Hunters need to identify ducks once they are in the hand in order to continue hunting and to obtain maximum benefits from the point system. A survey conducted to test hunters' aptitude at duck identification showed that in 1970, 321 hunters identified 705 ducks with an accuracy of 87 percent. In 1971, 84 percent of 161 ducks were correctly identified. These results indicate a better knowledge of in the hand identification than was anticipated. In most parties one hunter was the most astute and verified identifications. In hand identification is therefore possible for most hunting parties. In those parties where ducks were misidentified the hunters assigned the birds most often to higher point categories.

### Hunter Opinion

Questionnaires were sent to 400 duck stamp buyers to sample opinion of the point system. The technique was weighed to sample successful hunters more heavily. Sixty-five percent of those answering the questions said they enjoyed hunting under the point system more than other regulations. Breaking down the categories by the success of duck hunters the following was observed:

1. Hunters killing no ducks; 33 percent enjoyed hunting under the point system more and 7 percent said they liked it less.

2. Hunters bagging 1-10 ducks per season; 49 percent more and 10 percent less.

3. Hunters bagging 11-20 ducks; 75 percent more and 6 percent less.

4. Hunters bagging 21 plus ducks per season; 82 percent liked the point system better while only 1 percent said less.

The vast majority of the hunters favored the point system and the consensus of opinion indicated a desire for continuing it.

### CONCLUSIONS

Evaluation of the data collected thus far allows several conclusions.

1. The point system allows the greatest flexibility of any species oriented regulation experimented with so far. It gives incentive to the more skilled hunter while it provides for the less competent hunter who just wants to shoot a couple of ducks and go home. This regulation does not penalize the ardent hunter for problems associated with non-skilled sportsmen.

2. This regulation has met with widespread hunter support compared with much dissatisfaction with some previous regulations. The point system introduced additional incentive to identify waterfowl on the wing and hunters reported enjoying their hunting much more under this new challenge.

3. Hunting pressure was successfully directed away from hen mallards and wood ducks (90 point birds) and toward lower point drake mallards.

4. The point system in 1970 and 1971 was no more liberal and probably more restrictive than other regulations per-

mitted in the rest of the flyway. Hunters passed up wood ducks, hen mallards, and some other species and ended up with fewer ducks bagged. Under conventional regulations there was no incentive not to shoot these birds. The end result was a lower kill of hen mallards and wood ducks, two of the most common ducks in Iowa. Comparing the increase in total kill in Iowa to several states not testing the point system showed that Missouri, Arkansas, etc., experienced greater increases in total harvest.

5. Violation rates in 1970 and 1971 were no greater than in prior years and data indicated that 88 percent of the parties checked in 1970 would not have needed to reorder to remain legal. Problems due to the incentive to reorder or discard high point birds were not deemed more significant than under conventional regulations by 80 percent of the Iowa enforcement officers.

6. The point system for regulating the daily take of ducks has more beneficial aspects than any type of species management regulation tried before. It does not induce a greater harvest nor does it appear to increase the violation rate. A greater flexibility is allowed and could provide for better harvest methods during years of curtailed harvest of some species.

7. The point system should be tested on a much broader scope to evaluate the potential differences in states with different migration patterns, harvest rate and social attitude.

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