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PHEASANT WEIGHTS AND TIME OF SEASON IN RELATION TO MEAT PRODUCTION IN NEBRASKA

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During the 1942 pheasant hunting season in Nebraska 479 bagged cock pheasants were weighed in western and southwestern counties. Analysis of the weights revealed that the time of the open season apparently has a material effect upon the tonnage of meat harvested for human consumption.

The weighing program was originally planned for the purpose of gathering comparative bird-weight data from individual counties. However, with wartime thinking turned toward production of food, the data also suggested a later opening date as a means of increasing the meat yield.

Nebraska's 1942 pheasant season was a split season. It extended from October 15 to November 2, inclusive, then reopened November 19 and continued through November 30.

The numbers of pheasants weighed during five periods of the season, and the average weights for each period, were as follows:

	Numbers of pheasants	Average weights	
		Pounds	Ounces
October 15 to October 20, inclusive	210	2	7.9
October 21 to October 26, inclusive	98	2	9.3
October 27 to November 2, inclusive	61	2	9.6
November 19 to November 24, inclusive....	54	2	9.9
November 25 to November 30, inclusive....	56	2	10.6
	479	2	8.97

Pheasants shot in the period October 21 to October 26 averaged 1.4 ounces heavier than pheasants shot from October 15 to October 20. The weights were checked against percentages of old pheasants and young of the year taken during the several weeks of the season, and it was clear that the gain was not due merely to the increased proportion which old birds contributed to the bag as the season advanced. The increase in average weight was largely the result of the gain in weight made by young males during early season.

Birds of the year, as determined by examination for the bursa of Fabricius, constituted 87 per cent of the take from October 15 to October 25, inclusive, and 79 per cent of the take from October 26 to November 2, inclusive. Weights of old pheasants varied somewhat from week to week, with some periods showing increases and some showing decreases over the previous week. However, average weights of birds of the year showed a steady increase each succeeding week as the season progressed.

For the entire season young of the year totaled 71.8 per cent of the take. During the first 10 days 87 per cent of the bagged pheasants were young of the year, but in the last 10 days of November only 52 per cent were young birds.

Since hunting pressure is almost always heaviest during the early part of an open season particular importance attaches to the opening date when meat is a real consideration. A couple of surveys that we have made and that we are still summarizing in part indicate that for the 1942 season in Nebraska roughly 35 to 40 per cent of the entire take was in the first week or a bit less when we had all together 31 days of shooting. The data indicate that young pheasants gain weight less rapidly after late October than earlier in that month. From the meat standpoints this means that a season opening after October 25 would result in a greater meat yield since weight increase is particularly rapid up to that date.

Analysis of the 1942 weights leads to the conclusion that a season opening approximately 10 days later than in 1942 would have enabled the average cock pheasant to attain an additional ounce in weight. One additional ounce per bird harvested means an extra 62.5 pounds from each 1,000 birds harvested, or over 31 additional tons of meat from each million birds taken.

DISCUSSION

CHAIRMAN BENNITT: I suppose there might be some factors that would make it undesirable to open the pheasant season quite that late, though?

MR. H. ELLIOTT McCLURE (Nebraska): Yes, but it goes up and levels off after that point. By January 15 they had dropped about 4 ounces.

CHAIRMAN BENNITT: I wonder if there are any other birds in any of our states

to which this idea could be applied. Had any of you considered it? How about quail? Our Missouri season is November 10 to December 31, inclusive. There has been a good deal of contention in that State that the season ought to extend on into January. There are certain reasons against it. I am afraid when people read this paper they may find another argument for doing so. Could the quail season in any of the states which are represented here be put back for this same reason, and would it work in the same way? That is undoubtedly a point to think of.

MR. WARREN W. CHASE (Wisconsin): I would like to ask Mr. Mohler if his findings would indicate that the increase in weight coincided with the harvesting of the crops on which the birds were feeding at that time.

MR. MOHLER: I have to think a little on that one. Most of these weights that I have mentioned came from three counties. Two of those counties, incidentally, border on Colorado—the extreme northeast of Colorado. We had very good hunting weather through all of this season. The only poor weather was on the opening 2 days in my area, and I followed the birds all the time. There was not a very great shift in feeding crops from mid-October to late November.

MR. RALPH H. IMLER (Colorado): There is one other point that seems to me well worth consideration in this connection if you are going to apply it to birds in general. If you are in an area where there is very much predation on these birds, the loss might exceed the benefits if we postponed the season very long.

CHAIRMAN BENNITT: In other words, that means that the gains with respect to weight by delaying the season might have been taken first by somebody else.

MR. IMLER: Yes.

CHAIRMAN BENNITT: What do you think about that, Mr. Mohler?

MR. MOHLER: In my particular area I can't say very much about the loss from predation. What you say sounds very possible.

MR. IMLER: It probably wouldn't apply so much to the pheasant. I wasn't thinking of that bird. It would apply more to the quail and some other birds.

MR. MOHLER: No doubt. In our area we can stand a considerably increased take. In other words, if we look at it from another angle, we believe that probably our total take in numbers of birds, which goes back to numbers of hunters and numbers of hours spent in the field, would not be very much changed if we postponed the season. What we have done simply suggests that a certain number of birds will be taken whether we begin at one time or another, and if we would just postpone it our take would be big. We have plenty of birds.

MR. PHIL GOODRUM (Texas): Mr. Mohler has shown that the greater weight and greater amount of meat might come from pheasants when the season was opened later. There are certain small game species in Texas where that might not apply. We do know that there is a fluctuation in the breeding season, and other interrupted factors that might continue that somewhat. In Dimmit County in lower south Texas we are doing considerable research work on quail—bob-white quail. In that section, on June 28 most of the birds were in coveys—I don't mean to say in coveys; they appeared to be in coveys; actually, pairs of birds were congregated under mesquite trees to seek the shade. It was very evident that breeding had ceased, which was caused by excessive dry weather. On June 29 we had a 2-inch rain, and immediately after, the birds began to disperse and nest all over, and as a result that section of the state is experiencing one of the largest quail crops in the history. It is obvious that those birds that came off late wouldn't weigh as much as those hatched earlier. That same thing might be true with squirrels. I have found that the peak of the squirrel breeding season in Texas fluctuates as much as 2 weeks within a 12-month period.

Those are some factors that also have an equal bearing on the weight of the birds that might be produced and certainly should be considered in setting open and closed seasons.

MR. FRED R. JOHNSON (Colorado): I would like to point out a similar instance in deer in the coastal range of California. The deer killed in August—the season 30 days beginning August 15—if allowed to go a month longer without shooting

would weigh from 20 to 30 pounds heavier per animal. Of course that would apply more to the younger deer that make greater gains more rapidly.

CHAIRMAN BENNITT: It certainly seems to be the consensus of those who have spoken that the time of season in relation to weight is a factor worth considering.

MR. GUY D. JOSSERAND (Kansas): I think that I see in our discussions all through these meetings that administrators are thinking more of the food concept all the time, which may get us into trouble later on. We wouldn't have any game left in this country if we had emphasized the food concept down through the years rather than the recreational concept. While we administrators probably can go ahead and discuss this thing to our hearts' content and go as far as we like on it, I am inclined to think we don't want this to reach too far to the general public. We still want to keep the thought uppermost in the sportsman's mind that recreation is really the value of game and a few ounces of weight on the bird doesn't mean a lot to him if the season would inconvenience him in getting out.

These are things to be considered to justify our activities in a war period such as we are in now. Before we start changing seasons or recommending changes, let's bear in mind, or at least hope, that within the next couple of years we will be out of this period of food concept and back on our old grounds again.

CHAIRMAN BENNITT: Let us all hope so too. I think that word of caution is very appropriate. I am sure, too, that no one would consider that the matter of a slightly increased weight would be a deciding factor. It would be one, as I think Mr. Mohler would agree, that ought to be considered, other things being equal.

MR. MOHLER: Yes, sir.