

2020 Missouri Wild Turkey Brood Survey Results

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The Missouri Department of Conservation (MDC) has conducted a wild turkey brood survey annually since 1959. During the survey, MDC staff and citizen volunteers record turkey observations during June, July, and August to determine the success of the hatch. Data are collected at the county level and reported statewide and by Turkey Productivity Region, which are counties grouped by similar land cover composition (Figure 1). Each year, hundreds of staff and thousands of citizens participate in the survey and we are grateful for their contribution. I would also like to thank those staff involved with distributing survey cards and entering the thousands of turkey observations obtained during the survey. The turkey brood survey provides important information for the Conservation Department's Wild Turkey Management Program, and the large dataset we have obtained since the survey was initiated would not have been possible without the dedication of staff and our citizen volunteers.

In 2020, MDC staff and citizen volunteers recorded observations of over 62,000 turkeys during the three-month survey. The 2020 statewide poult-to-hen ratio (PHR) was 1.0, which was 11% greater than the 2019 PHR and equal to the previous five-year average (Figure 2, Table 1). However, this year's PHR was 17% lower than the 10-year average and 29% lower than the 20-year average (Table 1). Regional PHRs in 2020 ranged from 0.7 in the Ozark Border, Ozarks West, and West Prairie Regions to 1.4 in the Northeast and Northwest Regions (Figure 1, Table 1). Compared to the five-year averages, production in 2020 was higher in the Northeast, Northwest, and Union Breaks Regions and lower in the Mississippi Lowlands, Ozark Border,

Ozarks East, Ozarks West, and West Prairie Regions (Table 1). Production in the Lindley Breaks Region was equal to the five-year average for that region (Table 1).

At the statewide scale, 38% of hens were observed with a brood, which was up from 34% in 2019 and was 11% greater than the 5-year average (Table 2). The percentage of hens observed with a brood ranged from 29% in the Ozark Border Region to 50% in the Mississippi Lowlands Region (Table 2). Statewide, the average number of poult per brood was 3.8, which was up from 3.7 in 2019 and 2% greater than the five-year average (Table 2). The average number of poult per brood ranged from 3.2 in the West Prairie Region to 4.3 in the Mississippi Lowlands, Northeast, and Northwest Regions (Table 2).

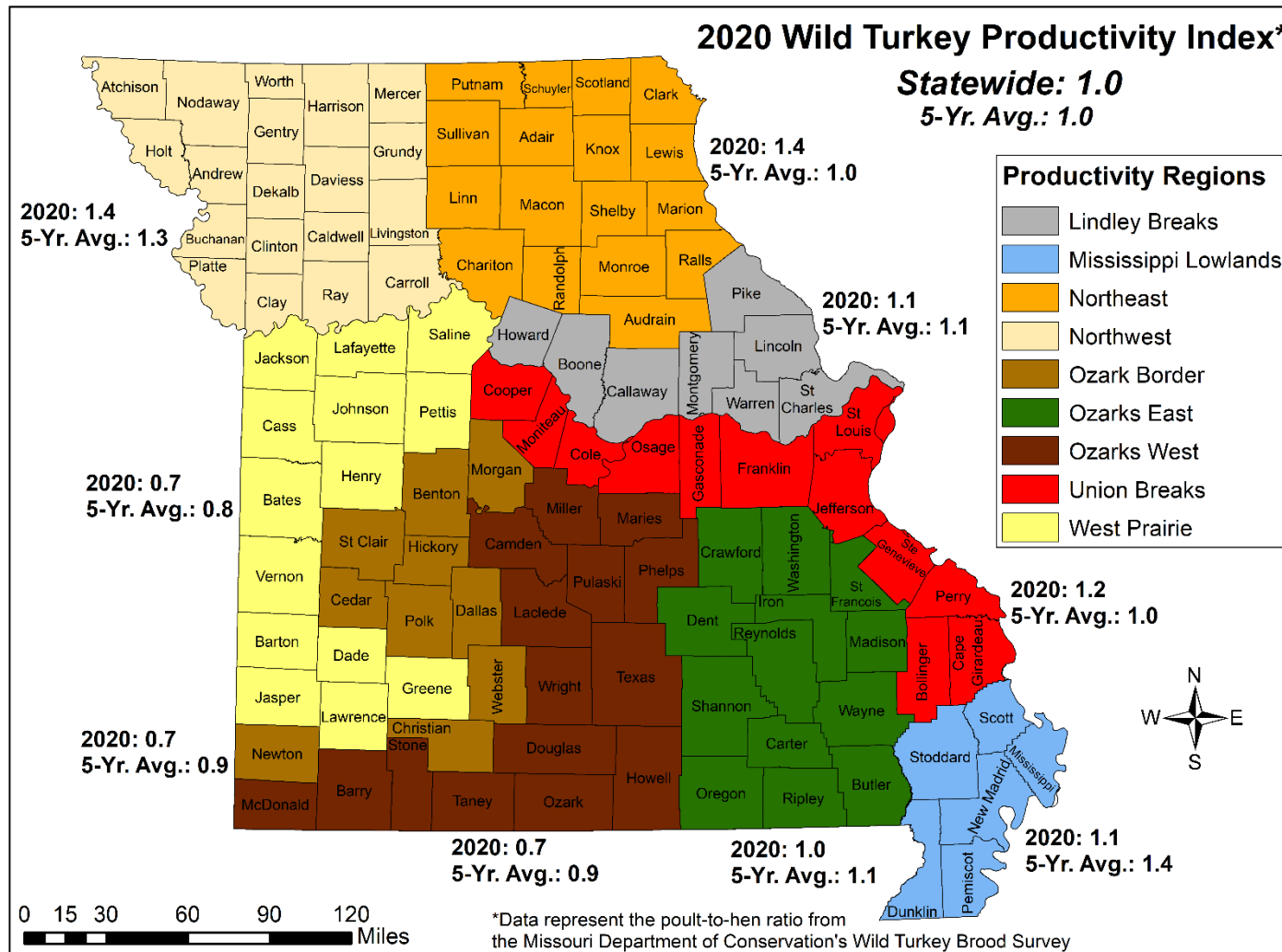


Figure 1. Index (poult-to-hen ratio) of Missouri wild turkey production by Turkey Productivity Region. Data were obtained during the Conservation Department's 2020 Wild Turkey Brood Survey and are compared to the previous five-year averages.

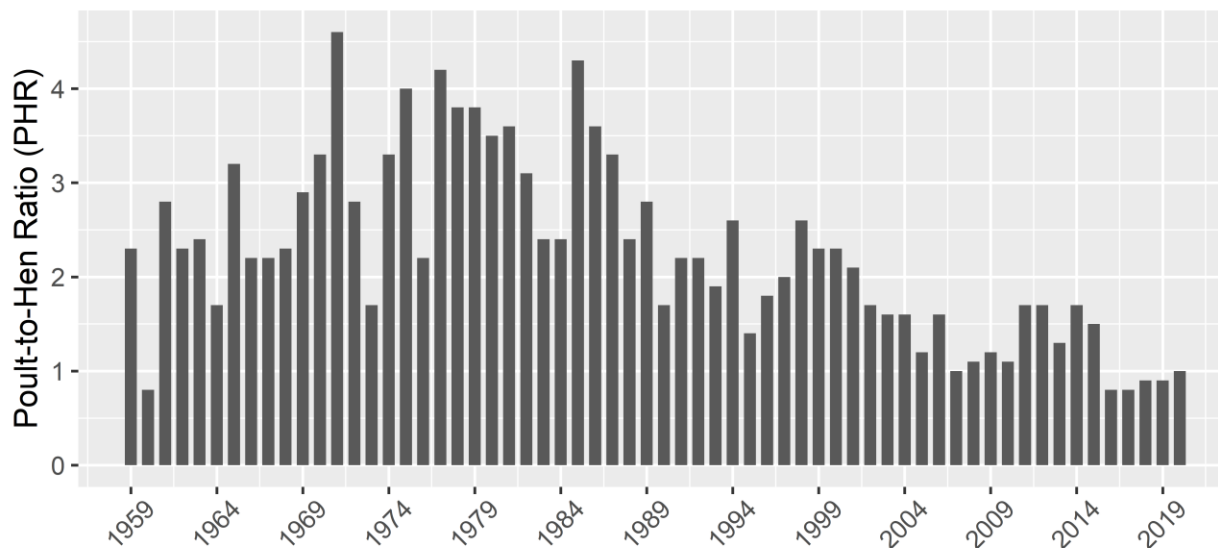


Figure 2. Statewide wild turkey productivity index (poult-to-hen ratio) in Missouri based on observations during the Conservation Department’s Wild Turkey Brood Survey, 1959-2020.

Table 1. Index (poult-to-hen ratio) of Missouri wild turkey production by Turkey Productivity Region (Figure 1). Data were obtained during the Conservation Department’s Wild Turkey Brood Survey in 2020 and are compared to the previous year and the average for periodic intervals.

Productivity Region	2020 Index	1-Year (2019) Change	5-Year (2015-2019) Change	10-Year (2010-2019) Change	20-Year (2000-2019) Change
Lindley Breaks	1.1	22%	No Change	-21%	-27%
MS Lowlands	1.1	-35%	-21%	-27%	-48%
Northeast	1.4	75%	40%	8%	No Change
Northwest	1.4	56%	8%	No Change	-7%
Ozark Border	0.7	No Change	-22%	-36%	-46%
Ozarks East	1.0	No Change	-9%	-33%	-38%
Ozarks West	0.7	-22%	-22%	-42%	-50%
Union Breaks	1.2	20%	20%	No Change	-14%
West Prairie	0.7	-13%	-13%	-36%	-42%
Statewide	1.0	11%	No Change	-17%	-29%

^aStatewide totals include observations where Productivity Region was not recorded on the survey form.

Table 2. Data obtained during the Missouri Department of Conservation’s Wild Turkey Brood Survey, listed by Turkey Productivity Region (Figure 1), 2020.

Productivity Region	% Hens w/ Brood	Average Brood Size	Poult-to-Hen Ratio	Gobbler-to-Hen Ratio
Lindley Breaks	37%	3.8	1.1	0.7
MS Lowlands	50%	4.3	1.1	0.6
Northeast	38%	4.3	1.4	0.7
Northwest	39%	4.3	1.4	0.8
Ozark Border	29%	3.6	0.7	0.7
Ozarks East	35%	3.8	1.0	0.4
Ozarks West	36%	3.3	0.7	0.7
Union Breaks	46%	3.9	1.2	0.5
West Prairie	32%	3.2	0.7	0.8
Statewide	38%	3.8	1.0	0.6

^aStatewide totals include observations where Productivity Region was not recorded on the survey form.