Effects of Variable Spring Harvest Regimes on Annual Survival and Recovery Rates of Male Wild Turkeys in Southeast Louisiana

Michael J. Chamberlain, *School of Renewable Natural Resources, Louisiana State University Agricultural Center, Baton Rouge, LA 70803*

Jennifer L. Norris, *School of Renewable Natural Resources, Louisiana State University Agricultural Center, Baton Rouge, LA 70803*

Blake A. Grisham, *School of Renewable Natural Resources, Louisiana State University Agricultural Center, Baton Rouge, LA 70803*

Frederick G. Kimmel, *Louisiana Department of Wildlife and Fisheries, P. O. Box 98000, Baton Rouge, LA 70808*

Michael W. Olinde, *Louisiana Department of Wildlife and Fisheries, P. O. Box 98000, Baton Rouge, LA 70808*

Norman J. Stafford, III, *Louisiana Department of Wildlife and Fisheries, P. O. Box 98000, Baton Rouge, LA 70808*

Abstract: Spring harvest is a primary mortality factor for male wild turkeys (*Meleagris gallopavo*), but the relationship between spring harvest regime and annual survival is not well understood. We banded 462 male wild turkeys from 1987 to 2007 in southeastern Louisiana to estimate annual survival and band recovery rates relative to spring harvest. We used program MARK to assess these parameters under a liberal harvest limit (three-bird limit; 1989–1997) and a reduced conservative harvest limit (two-bird limit; 2000–2007). Of 204 males banded during the liberal limit hunting season, 137 were recovered, whereas 138 of 258 banded males were recovered under a conservative harvest limit. Estimated recovery rates during the liberal limit were 0.75 (SE = 0.05) and 0.63 (SE = 0.04) for adults and juveniles, respectively. Recovery rates during the conservative limit were 0.61 (SE = 0.04) and 0.48 (SE = 0.05) for adults and juveniles, respectively. Annual survival averaged 0.16 (SE = 0.05) and 0.43 (SE = 0.05) for adults and juveniles, respectively, during the liberal harvest limit. Conversely, during the conservative harvest limit, annual survival averaged 0.31 (SE = 0.05) and 0.56 (SE = 0.05) for adults and juveniles, respectively. Our findings suggest that bag limit reductions contributed to increased annual survival for male wild turkeys. We contend that male wild turkeys were likely over- harvested on our study area during the liberal harvest limit, which contributed to exceptionally low annual survival rates. Managers should attempt to assess survival rates of male wild turkeys in harvested populations to properly manage spring harvest and develop appropriate harvest limits.

Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies 64:192