Winter Wheat – Finding a Balance Between Modern Agriculture and Prairie Nesting Ducks

Brandi R. Skone*, Ecology Department, Montana State University, Bozeman, Montana 59717

Jay J. Rotella, Ecology Department, Montana State University, Bozeman, Montana 59717

Johann Walker, Ducks Unlimited, Bismarck, North Dakota 58503

The Prairie Pothole Region (PPR) of North America is a highly valuable landscape for breeding waterfowl that has been predominantly converted to some form of agriculture in the last century. This is cause for concern since the extent of cropland has been strongly associated with declining numbers and nest success of ducks. With the recent increase in economic value of some cash crops and the potential to lose highly valuable nesting habitat in the Conservation Reserve Program (CRP), there has been an interest in evaluating alternative farming practices as potential breeding habitat for waterfowl. While past research has shown nest success of waterfowl to be very low in spring-seeded crops, limited research has assessed the potential of winter wheat, a fall-seeded crop, as a nesting habitat. We wanted to assess and compare the use and success of prairie-nesting ducks in winter wheat to perennial cover (CRP, grassland, etc.) in the PPR of North Dakota. We monitored duck nests (*Anas* spp.) in winter wheat (n = 1284) and perennial cover (n = 3244) from 2010-2012. We will use a model-selection based approach to evaluate nest survival after accounting for a variety of environmental (wetland density, vegetation density, etc.) and temporal covariates (initiation date, nest age, etc.) and predict that daily nest survival will be similar in both habitats. Results from this study will provide valuable insight for wildlife managers on the benefits and weaknesses of winter wheat as a breeding habitat for waterfowl.