

Name: Adetola Ajayi

Title of thesis: Invasive Species on British Columbia's Grasslands: Estimating The Benefits of Control Policies.

Co-Supervisor: Lauchlan Fraser (PhD)

Co-Supervisor: Peter Tsigaris (PhD)

Committee member: Joel Wood (PhD)

Abstract of research

Invasive species are among the most important drivers of biodiversity loss and changes in ecosystem services, leading to substantial worldwide economic and ecological damages. Damage reductions need to be examined when establishing control programs and public policy. This study examines people's attitudes and perceptions of the problem of invasive plant species on grasslands in British Columbia (B.C.) using a choice experiment. The results of the choice experiment indicate how much respondents are willing to pay for various attributes of a control policy, such as location, method of control, and degree of control for invasive plant species in B.C. It also determines how much respondents are willing to pay for different policy packages (combinations of the control attributes) to control invasive plant species. Results from 1,000 respondents across B.C. indicate serious concern and a willingness to pay to control the problem. Preference is given to control everywhere in the interior of B.C. relative to only control in sub-regions of the interior. Biological and targeted grazing are preferred to chemical spraying and moderate or major eradication relative to minor eradication. Estimates indicate that, at the minimum, British Columbians are willing to pay around CDN\$200 million per year in extra taxes to control invasive plant species everywhere in the interior of B.C. with a moderate or major eradication over the next decade using chemical spraying. Using biological or targeted grazing, the valuation doubles to around CDN\$400 million annually. These values are estimates of the aggregate benefits of controlling invasive species in B.C.'s grasslands.