

Abstract

Goldenseal (*Hydrastis canadensis*) is a long-lived, perennial, native forest plant that is listed under Appendix 2 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Despite a ‘vulnerable’ regulatory listing in Pennsylvania due to harvest concern for the medicinal plant trade, little information is available to help enable woodland owners to grow goldenseal for income to reduce pressure on wild populations. One area of goldenseal production that is currently understudied is post-harvest handling – specifically the effects of drying time and temperature on the medicinal chemical constituents. Therefore, the goal of the project is to investigate the chemical composition of three major identified medicinal constituents found in goldenseal rhizomes (berberine, hydrastine, canadine) in relation to drying time and temperature. The results of the study will help standardize a component my dissertation work looking at the effect that season of harvest and growing environment has on the concentration of the chemical constituents. This work, combined with additional research I will complete on goldenseal habitat and the supply of goldenseal in Pennsylvania will be useful for informing government regulation of the species as well as provide recommendations for producers and industry.