PURPLE LOOSESTRIFE: BIOLOGY AND MANAGEMENT OPTIONS. Stevan Z. Knezevic, Associate Professor, University of Nebraska, Concord, NE 68728-2828.

The introduction and spread of exotic plant species is one of the most serious threats to biodiversity. Purple loosestrife (*Lythrum salicaria*) is one such species that is currently invading wetlands and waterways in Mid-Plains states including an estimated 12,000 acres in Nebraska. Once a wetland is taken over by purple loosestrife, the natural habitat is lost and the productivity of native plant and animal communities is severely reduced. A series of field studies were conducted from 2000 to 2009 at three locations in Nebraska with the objective to evaluate performance of 14 herbicide treatments, mowing, and disking. In general, excellent two to three year long control was achieved with glyphosate, imazapyr, or metsulfuron applied alone. Imazapyr treatments however caused detrimental effects to the native vegetation, especially grassy species, indicating limited use of that treatment. Repeated disking that was conducted three times per season in semidry areas and over a five year period provided much better control than repeated mowing.

2009 North Central Weed Science Society Proceedings 64:150.