

RIPARIAN WOODY REVEGETATION VIA DIRECT SEEDING

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Since the early 1990's many riparian crop fields have been abandoned due to frequent growing season floods. These areas have reverted to extensive weed patches, if not seeded to trees or grasses. When replanted to trees and shrubs, the traditional method has historically used bare root seedlings planted by machine into a prepared seedbed. This method is expensive and takes years before canopy closure. During the establishment period these areas have shown robust populations of Canada thistle, leafy spurge and wormwood. Part of the problem has been that traditional planting consisted of straight, wide-spaced single-species rows. Intensive deer browsing of the most desirable species during the past decade has further reduced the effectiveness of traditional riparian plantings by allowing weeds to become fully established. We propose that direct seeding of trees and shrubs can overcome these problems and reduce the incidence of noxious or invasive weeds. Direct seeding small-seeded tree and shrub species using a grass drill lowers establishment costs and provides tree and shrub cover sufficient to shade out most weeds within 2-5 years. With upwards of 10,000 emerged seedlings the first spring, this technique provides enough stems per acre that sufficient numbers of plants should escape deer browse, resulting in an effective, closed canopy planting. Although direct seeding has been used in many Midwestern states, it has not been tried in the limited rainfall areas of the Great Plains. The presentation will showcase our experiences with direct seeding of trees in riparian sites, including the benefits, drawbacks and economics of the technique as well as the invasive species concerns.