

Indiana Plant Materials Long Range Plan 2006-2011

I. Introduction

The mission of the Plant Materials Program is to develop and transfer effective state-of-the-art plant science technology to meet customer and resource needs. The purpose of the Plant Materials Program is to: 1) assemble, test, and release plant materials for conservation use, 2) determine techniques for successful use and management of conservation species, 3) facilitate the commercial increase of conservation species, 4) provide for the timely development and transfer of effective state-of-the-art applied science technology to solve conservation problems, and 5) promote the use of plant science technology to meet the goals and objectives of the Natural Resources Conservation Service (NRCS) Strategic Plan.

The Indiana Plant Materials Long Range Plan (LRP) identifies and prioritizes customer, resource, and program needs.

II. Long Range Plan Development

This LRP was developed in accordance with the National Plant Materials Manual. This plan is to be used for directing plant materials activities within the state. This plan will be used along with the respective plans of the states within the service area to develop the Plant Materials Center LRP. This plan may also serve as a reference to develop specific action items that will be incorporated into Indiana's annual Business Plan.

The listing of identified customer, resource, and program needs, were developed by the State Plant Materials Committee. The Plant Materials Committee is comprised of a diverse group of NRCS field and state office employees and other partners. See Appendix A for a listing of current committee members. Along with the input by the committee members, additional references were used to help identify and prioritize problems and needs. Needs are categorized by NRCS Goals and Objectives.

III. NRCS Objectives, Needs, Recommended Actions

A summary of problems, needs, and recommended actions are provided in Table 1. Details are provided in the following text.

NRCS Objective: Clean and Abundant Water

(1) Alternative Grassed Waterway Species - Degradation of water quality has occurred through excessive sedimentation from unstable areas. The area of concern is crop fields damaged from concentrated flow of surface water. Current and past agriculture practices have resulted in excessive gully erosion. Current plant materials are limited in wildlife benefits, non-native to the area, and could be aggressive by spreading to non-target areas. The need exists to identify native species that may be used to stabilize gully erosion and to provide secondary benefits such as wildlife habitat. In addition, establishment techniques for the identified species need to be investigated. Information pertaining to Grassed Waterways is found in the FOTG and the Engineering Field Handbook, Chapter 7.

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Recommended Action: Native species for use in grassed waterways need to be identified and evaluated. Establishment and management techniques need to be determined for the identified plant materials.

Priority: High

(2) Shrubs for streambank protection - Degradation of water quality has occurred through excessive sedimentation from unstable areas on streambanks. Shrub species suitable for streambank protection should be identified, tested, and released for this purpose.

Recommended Actions: Test and complete evaluations of native shrub species including; Coralberry, Highbush Cranberry, and Elderberry for a potential plant materials release of this species.

Priority: High

NRCS Objective: High Quality Productive Soils

Vegetative Hedges – Intensive cropping systems in Indiana are resulting in lower water infiltration, increased runoff, and reduced productivity. This results in significant damage to cropland each year caused by repeated ephemeral gully erosion. Customers are reluctant to install traditional erosion control practices due to loss of crop acreage and cost. A need exists to find ways to slow water runoff, trap sediment, and stop ephemeral gully formation in these areas.

Recommended Action: Investigate the use of vegetative hedges in cropland settings and find native plants suitable to survive these conditions. When suitable plants are found, transfer this information to customers and provide technical guidance on application.

Priority: Medium

NRCS Objective: High Quality Wetlands

Wild Bamboo – *Arundaria gigantea* was once prevalent in Southern Indiana floodplain wetlands. This species could provide excellent wildlife habitat (e.g. swamp rabbit, a state endangered species) in in MLRA's 114,115, 120, 121, and 122.

Recommended Action: Evaluate and Collect *Arundinaria gigantea* and evaluate its potential for use in wetland restorations and wildlife habitat development on floodplain wetlands in southern Indiana.

Priority: Medium

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NRCS Objective: High Quality Wildlife Habitat

(1) Prairie Crabapple Species – Two native crabapple species: *Malus coronaria* and *Malus ioensis*, have potential to be released for wildlife habitat enhancement.

Recommended action: Prairie crabapple species should be collected and assembled at the Rose Lake PMC in cooperation with the Vallonia State Nursery. Collected plant materials will be evaluated for use in conservation and wildlife habitat enhancement, and populations will be selected for release. Field plantings will be established to further determine the usefulness of selected populations for conservation uses.

Priority: High

(2) Tree Plantings in Floodplains – Tree plantings in floodplains along the Lower Wabash and White River have low survival rates due to high mortality.

Recommended action: Develop and complete a study plan to determine if stream gage data can be used to predict the success rates for tree establishment in floodplains.

Priority: High

NRCS Objective: Healthy Grazing Lands

Alternatives to Reed Canarygrass – Controversy abounds concerning the use of Reed Canarygrass in Indiana. In natural areas and along waterways it is considered an invasive species. On the other hand, in grazing operations, low alkaloid varieties are valuable options because of their productivity and tolerance for poorly drained soils. As a result of these issues, different groups within the conservation partnership are making different recommendations on the use of this species.

Recommended Action: Alternative species should be evaluated as a viable forage source on poorly drained soils.

Priority: High

NRCS Objective: Cooperative Conservation

(1) Invasive Species – (a) Conservation partners need on going updates on invasive plant species. (b) Coordination of recommendations concerning the use of invasive species as determined by the Invasive Plant Species Assessment Working Group (IPSAWG).

Recommended Action: (a) Educate the conservation partnership to promote the sale and use of alternative native species. (b) Plant Materials Committee will be represented on IPSAWG and when necessary present results to the FOTG committee for incorporation into appropriate FOTG practices.

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Priority: High

(2) Plant Materials Program Awareness – The public and some conservation partners are unaware of the plant materials program and activities.

Recommended Action: Develop educational materials on the Plant Materials Program.

Priority: High

(3) Soil Bioengineering – Soil bioengineering is not well understood or used in Indiana.

Recommended Action: Provide awareness training on soil bioengineering techniques to partnership employees at area meetings.

Priority: Medium

Appendix A. Listing of State Committee Members

Chairman: Ken Collins, Chairman, NRCS Forester, Indianapolis, IN (317) 290-3200 ext. 356

Members: Andrew Brown, NRCS District Conservationist, Covington, IN (765) 793-3651
Ruth Hackman, NRCS Soil Conservationist, Salem, IN (812) 883-3006
Ellen Jacquart, The Nature Conservancy Botanist, Indianapolis, IN (317) 923-7547
Jerry Lish, NRCS District Conservationist, Bedford, IN (812) 279-8117
James Norris, ISDA, Resource Specialist, Winchester, IN (765) 584-1141
Brad Rody, IDNR District Forester, Hartford City, IN (765) 348-5067
Doris Scully, NRCS District Conservationist, Brazil, IN (812) 446-8986
Susannah Hole, NRCS Grassland Conservationist, North Vernon, IN (812) 346-3411
Theresa Wojkovich, NRCS District Conservationist, LaPorte, IN (219) 324-6303

Native American Liason:

Nils Landin, NRCS, Cartographic Technician, Indianapolis, IN (219) 290-3200 ext. 391

NRCS, Rose Lake Plant Materials Center, East Lansing, MI (517) 641-6300:

John Leif, Manager

Dr. John Durling, Agronomist

Elaine Gerona, Office Automation Assistant

Sergio Perez, Biological Technician

Dave Burgdorf, Plant Materials Specialist (517) 641-7831

SWCD Plant Sale Subcommittee: Kim Winger, District Support Specialist, ISDA Division of Soil Conservation

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Table 1. Summary of Needs and Actions Taken

Problem	Plant Materials Needs	Ranking Priority and Status	Action Planned		
			Evaluate Existing Technology	Transfer Existing Technology	Develop New Technology/ Plant Release
NRCS Objective: Clean and Abundant Water					
Alternative grassed waterways species.	Plants that establish quickly and provide permanent cover in concentrated flow areas.	High Active	X	X	X
Shrubs for streambank protection.	Plants (shrubs) for streambank restoration.	High Active	X	X	X
NRCS Objective: Healthy Quality Productive Soils					
Vegetative Hedges	Plants that can be used to control erosion.	Medium Active	X	X	X
NRCS Objective: High Quality Wetlands					
Wild Bamboo	Arundaria gigantea to be used for wetland restorations.	Medium Active	X	X	X
NRCS Objective: High Quality Wildlife Habitat					
Prairie Crabapple species	Native crabapple species for wildlife.	High active	X	X	X
Tree plantings in floodplains	Study plan.	High Active	X	X	
NRCS Objective: Healthy Grazing Lands					
Alternatives to Reed Canarygrass	Evaluate species to replace Reed Canarygrass for forage production.	High New	X	X	X
NRCS Objective: Cooperative Conservation					
Invasive Plants	Coordinate invasive species information with conservation partners.	High Active	X	X	
Plant Materials Awareness	Increase awareness of the plant materials program to the public and conservation partnership.	High Active	X	X	
Soil Bioengineering	Increase the use of soil bioengineering.	Medium Active	X	X	