



Considerations for Large Scale Collection of Smooth Cordgrass Seed (*Spartina alterniflora*. L)

William Skaradek, and Noel Murray USDA-NRCS Cape May Plant Materials Center and

Melissa Alvarez US Army Corp of Engineers NY District

Abstract

In the fall of 2005 the U.S. Army Corp of Engineers New York District and the USDA NRCS Cape May Plant Materials Center entered into an Agreement to coordinate a large scale collection of seed of smooth cordgrass from the Jamaica Bays area of the USDI National Park Service's Gateway Complex.

The collection effort utilized approximately 15 people for a two week period resulting in over 400 pounds of clean seed. Seed germination test were conducted and indicated 99% total viability.

Professional discussions and literature indicates that this quantity and quality of Pure Live Seed is unprecedented in this industry. These results were realized because of the utilization of agronomic technologies.

Materials

Assorted grass harvesting tools such as sickle grass hooks, pruning shears, sharpened machetes, large bladed knives; sharpening stones ; trashcans; large king size sheets; temporary shelter for staging bio-mass; boats, canoes and a truck and trailer large enough to haul bio-mass back to a seed processing facility.

Methods

- Visit seed collection sites ahead of crews.
- Feel for percent of seed set in the inflorescence.
- Determine stage of seed ripeness (milky, soft dough, hard dough or ripe).
- Once ripe seed locations are found, transport crew.
- Grass hand sickles and sharpened machetes performed best.



Top 2 photo's above showing diverse watercraft used to transport crews and seed to and from collection locations. Bottom shows how king size sheets made most effective transport.

SEED IN GLUME

GLUME OPENED

SEED REMOVED

GLUME MATERIAL

Results and Discussion:

Several key lessons were learned during this entire two week collection period. An interagency technical bulletin has been developed describing this effort in greater detail. It is:

Interagency Publication: MP-NJPMC-0501

Planning Considerations for Collecting Seed of Smooth Cordgrass *Spartina alterniflora* (L.) in the Mid-Atlantic.

The most important were:

- Inspecting harvest sites for seed set ahead of time.
- Determine stage of seed ripeness.
- Ensure all collectors have the proper equipment.
- Ensure all collection containers are kept alongside cutting operations
- Move materials quickly out of the sun.
- Allow for approximately two weeks of after ripening with active harvest bio-mass management in a closed building.

Summary:

The 2005 seed collection efforts were extraordinarily successful. The utilization of agronomic equipment to process, clean and store the seed contributed immeasurably to the cost effectiveness of this efforts as well as the high yield of Pure Live Seed. Additional information will be presented after the 2006 harvest has been processed and germination tested.

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