

Biological Control of Tamarisk
USU Extension Integrated Pest Management
Mini Grant Proposal 2005

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SITUATION STATEMENT:

Saltcedar or Tamarisk (*Tamarix ramosissima*) is a highly invasive, exotic weed that has taken over thousands of acres of riparian area in the Western United States. It was introduced to the U.S. from Asia in the late 1800's as an ornamental shrub. However, this aggressive invader has gotten out of control. Willows, cottonwoods and other native species have been completely crowded out as tamarisk has continued to take over waterways at an estimated 44,000 new acres each year. Saltcedar also poses a threat to the availability of water for urban and rural use. Already facing years of drought the western states need to protect as much water as possible to meet the needs of both urban and rural water users. Mature tamarisk plants consume an estimated 200-300 gal of water a day per plant. This results in billions of gallons of water that are taken out of the waterways and lost.

However, there is some hope. About 4 years ago the United States Department of Agriculture- APHIS received permission for the approved release of a bio control agent for tamarisk. The Chinese leaf beetle (*Diorhabda elongate deserticola*) was released into the wild in 2001 at an isolated site on the lower Sevier River near Delta, UT. In the past few years the numbers of beetles have exploded to the point that this fall, an estimated 300 acres of saltcedar near the release site was completely defoliated. Work was also done to collect these beetles and spread them to other areas in the state. With a little trial and error, a simple and effective means of collection has been established making the spread of these beetles to other areas in the state feasible.

With the potential impact these beetles could have on the control of tamarisk, we feel that it would be important to educate Extension personnel, private landowners and other interested individuals as to the benefits of the saltcedar leaf beetle and organize a collection date where any interested persons could tour the original release site and collect beetles to take home and release on their own land. If we can aid the spread of

these beetles then maybe we can control the spread of saltcedar and begin to decrease the infested acreage.

OBJECTIVES:

1. Develop a half day workshop that teaches land managers about “biological control of Tamarisk and how to restore riparian areas after the tamarisk plants are gone.” This workshop will be located in Millard County and will be for Extension Agents, County Weed Boards, Land owners, and any other interested persons.
2. Develop a half day tour of the Tamarisk bio agent progress in Millard County with a collection of the Chinese Leaf Beetle Bio Agent to disperse throughout Utah.
3. Develop a fact sheet and a map of Tamarisk bio agent release sites for the state.

PROCEDURES:

1. Invite presenters to attend workshop: **(Timeline: Upon notification of grant funding)**

Dr. Jack DeLoach from USDA-ARS in Temple, TX as the keynote speaker. Dr. DeLoach is well known as one of the foremost authorities on bio-control in the United States. He was instrumental in working with the saltcedar bio-control and in obtaining the necessary permits to release the Chinese leaf beetle inside the United States.

Marlon Winger formerly with USU-Extension in Carbon County. Marlon was one of the first to collect the beetles at the release site in Millard County and began the spread to other locations in the state. It was his group that developed the best collection methods.

Kevin Heaton with USU-Extension in Garfield County. Kevin has done a lot of work on riparian area restoration. He can discuss the methods of stabilizing stream banks, implementing structures to control water flow and other practices that will help restore the riparian areas after the tamarisk has been removed. This is a critical issue to protect the water quality and hopefully prevent other invasive weeds from taking over.

2. Determine workshop date: Probably in Mid June – Mid July. **(Timeline: Upon notification of grant funding)**
3. Arrange for the use of facilities to house the workshop in Delta, UT. **(Timeline: As soon as a date has been selected)**
4. Arrange travel for out-of-state presenters. **(Timeline: As soon as a date has been selected)**

5. Send out workshop announcements and registrations to potential participants throughout the state. **(Timeline: 2 months prior to the workshop)**
6. Collect registrations and order workshop materials (books, bio-control agents, and collection supplies). **(Timeline: 3 weeks prior to workshop)**
7. Hold workshop and collection day. **(Timeline: Selected date)**
8. Mail follow-up surveys to workshop participants to determine release sites and workshop success. **(Timeline: 1 week after workshop)**

Budget:

Item	IPM Funds Requested
Travel for Presenters and Participants	\$1000
*"Bio Control of Invasive Plants in the US" book for each participant	\$1500
Bio agent Collection supplies	\$100
Meals and breaks	\$200
Advertisements and mailing follow up surveys	\$200
Total	\$3000

*30 books @ \$50 = \$1500

The Skyline CWMA is very supportive of this program and will help with matching funds from a UDAF Weed Control Grant.