Kansas Department of Agriculture

# Noxious and Invasive Weed Update

## Plant Protection and Weed Control

*Fall 2013*

**Special points of interest:**

- If you are interested in having biological control agents released on your land, please contact you county Weed Director.
- The tamarisk leaf beetle will be introduced into one or two new counties each year so be patient, this biological control agent will be coming soon to a riparian area near you.

**Inside this issue:**



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## Tamarisk Leaf Beetle Found in Kansas

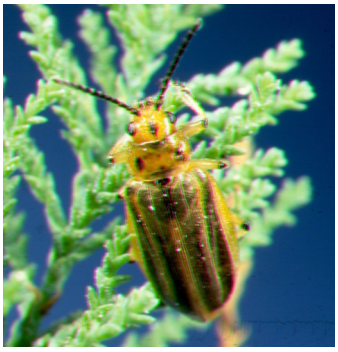
Tamarisk, or Saltcedar (*Tamarix* spp.) is a highly invasive tree that spreads quickly and invades riparian areas .

USDA-APHIS first approved the release of the biological control agent *Diorhabda elongata*, or tamarisk leaf beetle, in 1997. The insect proved to be an immediate success as it aggressively attacked the trees. It fed on the leaves and stressed them for several years to the point that many of the trees died, which is unusual for a biological control agent because they usually just stress a plant and slow down its movement and reproduction.

The Kansas Department of Agriculture made several releases of this agent but, was not successful in establishing a stable population. Then, in 2009, USDA-APHIS ceased issuing permits for the release of Diorhabda. This meant that the beetle could no longer be moved across state lines for release.

Without an established population, Kansas no longer had access to a valuable weapon in its fight to control tamarisk.

In August of this year, a landowner in southwestern Kansas reported an insect killing the tamarisk on his land. With his permission, KDA went out and collected a number of the insects which were later positively identified as Diorhabda. Because they moved into the state on their own, we now can now relocate the insect to other infested areas, allowing it to spread further, helping us to eradicate this destructively invasive weed.



## Scientific and Common Names—A *Rosa* sp. by any other name

I am sure you have seen those weird words listed after the names of the plants mentioned in these articles and in other places. Have you ever wondered what they mean or why they are there? Those words are actually known collectively as the latin, scientific or binomial name of the plant whose common name they follow. The people who determine these names use Latin because it is a "dead" language and therefore does not change over time.

This latin name is used to help identify a plant that may have many common names. For example, do you have a bodark tree growing in your yard? How about an Osage orange? A Hedge apple? If your answer to any of these is yes, your answer to all of them is yes. These are all common names for the same tree, *Maclura pomifera*. This roughly translates to Maclure's apple.

The Genus name, *Maclura* is a general term that may include several related species. The Species name, *pomifera*, however refers specifically to the Osage orange tree.

By the way, the term "*Rosa* sp." in the title of this article means that I am not referring to a specific (species) type of rose, just a general (genus) rose of any name, which, I have on good authority, all smell sweet.

-Scott Marsh

## Integrated Weed Management: Part 3 - Research

Through research comes better science, and better science produces more effective methods of controlling noxious and invasive weeds.

This research takes on many forms, from laboratory work by chemists trying different chemical mixtures, trying to find the ones that are most efficient at killing the weeds we don't want but not the plants we do. This takes a lot of time an effort to ensure that the compounds that seem to work well do not do any harm to any organism, from soil bacteria to human beings.

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Field scientists then take the herbicides that work the best in the laboratory and apply them to growing plants in tightly controlled settings, first in greenhouses then in the field. This is to make sure that soil conditions, rainfall, sunlight and other environmental factors do not cause the compounds to work differently than they did in the lab.

Chemical controls are not the only aspect of integrated weed management that is researched. Many universities and federal agencies conduct extensive research on mechanical, biological and cultural control methods to determine which work the best and how to apply them to get the best results.

Recent research has found a way to encourage cattle to graze sericea lespedeza by providing a supplement to help them digest the tannins that otherwise make the plant unpalatable.

Federal agencies work in many of the same fields, but they also go around the world conducting research on biological controls. They spend years finding insects and other organisms that will eat the plants we consider weeds. This is very important because we don't want to introduce agents that will cause even more problems.

The last level of research is conducted by you. When you try different methods or combinations of methods of weed control to determine which work best for you on your land against the types of weeds you are fighting, you are performing research.

## Control Corner: Timing Your Control Efforts

For every noxious and invasive weed out there, there is an optimal time to work at controlling it. For that matter, there is a best time for each type of weed control as well.

As an example, for field bindweed the best time to spray is in the early spring, while Russian knapweed is best sprayed in the fall after the first frost and musk thistle rosettes can be sprayed anytime of the year except winter.

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For any of the noxious weeds, it is important, and legally required, to time any form of control to kill the weeds before they produce another crop of seeds. If you don't you will add at least one more year, and probably more, to your control program before being able to eradicate your weeds.

The best time to apply mechanical controls for the majority of weeds is when they are actively growing in the spring. At this time of year the plants are using most of the reserve energy they stored in their roots over the winter so they will have little left to try to start over. They will spend the rest of the growing season replenishing their reserves.

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Biological controls vary greatly plant by plant and agent by agent depending upon which part of the plant they target.

Contact your county Weed Director or Extension Agent for more information.

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*Plant Protection and Weed Control*

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Plant Protection and Weed Control staff work to ensure the health of the state's native and cultivated plants by excluding or controlling destructive pests, diseases and weeds. Staff examine and analyze pest conditions in crop fields, rangelands, greenhouses and nurseries. Action taken to control potential infestations of new pests, whether they are insects, plants diseases or weeds, is beneficial to the economy and the environment.

**Our mission is to:**

- Exclude or control harmful insects, plant diseases, and weeds;
- Ensure Kansas plants and plant products entering commerce are free from quarantined pests;
- Provide customers with inspection and certification services.

## Invasive Species Spotlight

## Tamarisk (*Tamarix* sp.)

Tamarisk, also known as saltcedar and tamarack, is a tree or shrub that grows mostly in riparian areas. It was introduced in the early 1800s as an ornamental before it escaped to form large monocultures and out-competing native species.

It has very long roots with which it is able to absorb large amounts of water from deep underground. The roots also absorbs salt which it stores in its leaves. When the leaves die and decompose, this salt is held in the upper layers of the soil, making it difficult for other species to grow.

Another problem with tamarisk is that it destroys wildlife habitat. By forming monocultures and crowding out native species, there is little left for wildlife to use. While you may still see wildlife in tamarisk dominated areas, it is being used only because it is the only habitat available. If we were able to eradicate the tamarisk and restore the habitat to its natural condition, the wildlife would not only continue to use the same areas but would fare far better due to an increase in biological diversity and the increased abundance of their natural food sources.

There are several options for controlling tamarisk. Cutting is possible but the stumps must be treated to prevent resprouting. Basal bark spraying works but is difficult because of the density of tamarisk stands. Full tree removal from pulling or grinding works well but is expensive. The best herbicides for tamarisk control are Picloram and Triclopyr.