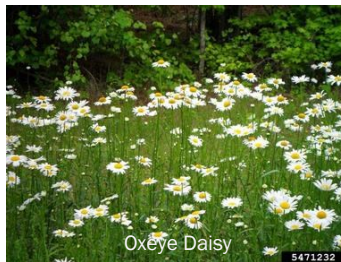


Special points of interest:

- GPS units are extremely useful tools for monitoring control sites or mapping new infestations.
- Japanese honeysuckle is related to the exotic bush honeysuckles but is a vine instead of a bush.
- The labels for pre-mix herbicides use the most restrictive language from the labels of each of the ingredients.

Weeds to Watch For

While everybody knows the state of Kansas has an official noxious weed list and an additional county option list, you may not know that we also have an unofficial "Invasive Weeds of Concern" list. This list contains those invasive species that the Kansas Department of Agriculture has identified as potentially damaging to the environment or the agricultural industry of Kansas.



Since this list is unofficial, there is no regulatory authority behind it, which means you cannot get into any trouble for having any of these weeds on your land. We do, however, encourage you to report



any of these weeds to your County Weed Director, County Extension Agent or the Kansas Department of Agriculture as soon as you find them so that they can help you control them before they become a problem.

Remember that the cheap-



est and easiest weed to control is the first one so be sure to report any new plants you find on your land, identify them so that you know if they are a potentially problem and then eradicate them if they are, or could be, invasive.

Below is the list of the Invasive Weeds of Concern in Kansas; you may recognize some of them from the Invasive Species Spotlight articles in previous, and future, newsletters.

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Invasive Weeds of Concern list

Italian plumeless thistle
 Medusahead rye
 Common Teasel
 Cutleaf Teasel
 Yellow toadflax
 Dalmatian toadflax
 Japanese knotweed
 Giant knotweed
 Bohemian knotweed
 Spotted knapweed
 Diffuse knapweed
 Tropical soda apple
 Japanese barberry
 Common buckthorn
 Reed canarygrass
 Oxeye daisy
 Siberian elm

Old world bluestems
 Grecian foxglove
 Cogongrass
 Tree-of-heaven
 Poison hemlock
 Hemp
 Giant hogweed
 Japanese honeysuckle
 Exotic bush honeysuckles
 Hydrilla
 Yellow flag iris
 Black locust
 Purple loosestrife
 Garlic mustard
 Silverleaf nightshade
 Autumn-olive
 Yellow starthistle

Pale swallowwort
 Black swallowwort
 Scotch thistle
 Eurasian water-milfoil

If you know of any of these species growing in Kansas, please call your County Weed Director, County Extension Agent or the Kansas Department of Agriculture.

They can help you eradicate the weed before it becomes a problem.

Integrated Weed Management: Part 12 - Monitoring

The last step in the integrated weed management of noxious and invasive weeds is Monitoring which relates back to the fourth step, Inventory. In monitoring your lands after treating for weeds you will need to do as complete an inventory as if you were starting over. While surveying the area you treated earlier is important to ensure you obtained the level of control you were hoping for, you will want to check other areas as well to ensure there aren't any plants you may have missed in the initial inventory.

Keep in mind that while you may pick the right control method and apply it at exactly the right time, kill-

ing every plant growing on your land, there is a very good chance that you will have just as many growing next year. This is because of the seed bank, a collection of dormant seeds in the soil waiting for their turn to grow. The seed-bank will get worse the longer you wait to control the source of the seeds. If you treat the weeds the first year they are introduced, you will not have to worry about the seed bank and you have the chance to eradicate the weeds with one treatment. But if you wait until they have been growing and spreading for several years, you may have to treat for five or more years before seeing

any reduction in numbers.

Once you know how many weeds have survived, or germinated, after the first treatment, you may want to adjust your plan of attack or continue as before, depending on the results of the first treatment. Whichever way you choose to continue, remember that you may have to repeat the process for several years in a row before you can successfully eradicate your weeds. The number, or acres, of weeds that you find in your monitoring activities will also allow you to plan for the coming year's commitment, in time, equipment and money, needed to do as good, or better, next year.

Monitoring also involves the identification of areas where you have been successful at eradication and need to focus on restoring the area back to the conditions you would like to see.

This article marks the end of our series on Integrated Weed Management. I hope it has been helpful and educational. In the future I will use this space to provide information on the Kansas Department of Agriculture's Agricultural Seed Program which, as I mentioned in an earlier newsletter, is a new program in the Plant Protection and Weed Control program.

Control Corner: Multi-pronged Attack

What could be better than an herbicide that does a pretty good job of killing those really nasty weeds that are interfering with your crop production, livestock operation or even your flower garden? A combination of two or more herbicides that gang up to attack them, that's what. Whether you buy each chemical separately and mix them together in your tank or buy them premixed, using a combination of chemicals that affect the weeds in different ways is often a more efficient and effective control option than using only one. How-

ever, it is important that you read the labels of each herbicide you are planning on mixing together before pouring them into your tank. Some chemicals do not play well with others. Make sure the labels allow your different choices to be mixed together to ensure that you will end up with the results you are hoping for. Also, confirm that each chemical can be used in the situation you plan on using them in and that you use the right amount of each chemical to apply each of them at the correct rate according to each label.

	
TANK MIX	PREMIX
<ul style="list-style-type: none"> • Customize your mix of chemicals to fit your soils and conditions • Apply each chemical at the optimal time • More handling and greater safety risks • Requires greater understanding of the chemicals and their interactions 	<ul style="list-style-type: none"> • Professionally prepared requiring less handling • Chemical ratios tested and prepared for the highest volume of use by region • Recommended application timing may not be optimal for all ingredients • May not be well-suited for all conditions and soil types

While it is a good thing to use different herbicides at different times to prevent the target weeds from developing resistance to any one chemical, using the same combination of mixes over and over again could

result in the same problem so make sure you continue to rotate through different herbicides to make sure you continue to see the same benefits year after year.



Plant Protection and Weed Control

Any questions comments or article suggestions, please contact:

Scott S. Marsh
State Weeds Specialist
1320 Research Park Drive
Manhattan, KS 66502
Phone: (785) 564-6697
Fax: (785) 564-6779
E-mail: scott.marsh@kda.ks.gov

Visit our website at:
agriculture.ks.gov

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

Exotic Bush Honeysuckles

It is for a very good reason that honeysuckle is considered to be one of the best smelling flowers. The twin long-petaled flowers do smell very good. However, there are several honeysuckles that we could do without smelling in Kansas. The exotic bush honeysuckles are extremely invasive and have taken over some of the wooded areas of northeastern Kansas. The term "exotic bush honeysuckles" is actually a generic term that refers to three species of honeysuckle bushes. Amur, Tartarian and Bell's are so



similar that it is difficult to tell them apart so they are generally lumped together. They are all 6 to 15 foot tall shrubs with about 2 inch long, egg-shaped leaves that grow in pairs on opposite sides of the branches. The color of the flowers varies between creamy white to pink and the berries

are red to orange and have a lot of seeds in them. While they will grow in pastures and roadsides, they are mostly found in wooded areas where they grow so thick that they shade out the natural understory and deplete soil moisture and nutrients.

Small plants can be removed by pulling but as



they get older or the infestation gets too big to control manually, they can be treated with a systemic herbicide like glyphosate. Because glyphosate is nonselective, care must be taken to not kill any of the desirable species still trying to grow under the honeysuckles. To do this, treat the shrubs in early spring or late fall when their leaves are still green but the desirable species do not have leaves.

Burning has shown some success but is difficult to control in wooded areas.