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NURSERY NEWS

2020 Nursery Program in Summary

In 2020, 237 nursery licenses were issued, a decrease of 46 from 2019. Several chain stores were closed during this time period, so that may account for a majority of the decrease. North Dakota inspectors also inspected and certified 982 acres of nursery stock at 34 growing sites and conducted 66 dealer inspections. Few violations were recorded, but the most commonly noted violations were nonhardy labeling requirements and plant labeling issues. More inspections will likely be conducted in 2021, as COVID-19 required adjustments to our daily availability in the early spring. Nurseries that we visited reported robust sales, so it was good to hear that from the industry.

One problem that occurred not only at some grower nurseries, but also across the landscape, was the sudden and rapid decline of spruce and pine. This was most noted in the east and southeast part of the state. Upon further investigation, the cause of the decline appeared to be caused by waterlogged soils from the very wet fall of 2019 into spring of 2020. The trees roots were too wet for too long, causing abrupt decline and death of trees.

In April of 2020, USDA confirmed that Ralstonia solanacearum race 3 biovar 2, a bacterial wilt disease not known to occur in the United States, was detected on imported geranium cuttings. The pathogen had not been detected since 2004. In North Dakota, nursery inspectors investigated a handful of potential trace forwards at greenhouses, but no Ralstonia was detected in North Dakota greenhouses. As a precaution, approximately 1,000 geraniums were destroyed. Subsequently, USDA announced in June that Ralstonia was eradicated from U.S. greenhouses.

Another problem that kept popping up at nurseries was Mouse Ears disorder on river birch. For more information about Mouse Ears, read on.

Mouse Ears on River Birch

This year I noticed at many nurseries unusual new growth on container river birch. The first flush of new growth had very small, crinkled leaves that appeared like some herbicide injury. While researching what might be causing it, I stumbled upon notes I had taken at a training I had attended. Similar growth was occurring on field grown river birch and another inspector at the training noted it was identified as Mouse ears disorder, caused by a nickel deficiency. A foliar spray of nickel sulfate applied shortly after budbreak correct the mouse ears disorder. Mouse ears is also more common in high pH soils, so lowering the soil pH may also help as it would with other metal deficiencies such as iron chlorosis in maples and other species. These metals may not be deficient in the soils, but they may be locked up in the soil due to the high pH. Label directions should be followed closely, as very low concentrations are required and an overapplication can results in toxicity to the plant.

Mouse ears disorder, C. Elhard

Noxious Weeds Rules and Regulations

Noxious weeds in a nursery, particularly field grown nursery stock, can cause damage to plants not only because of the significant competition with the trees, but can also be a harbor for pests and diseases that could damage the trees. Several states prohibit nursery stock contaminated with noxious weeds from being shipped to customers in those states. These are just a couple reasons to maintain noxious weeds at your nursery.

What are noxious weeds?
A noxious weed is a plant propagated by either seed or vegetative parts and determined to be injurious to public health, crops, livestock, land, or other property.

Listed below are the 13 state noxious weeds in North Dakota:
1. Absinth wormwood
2. Canada thistle
3. Dalmatian toadflax
4. Diffuse knapweed
5. Houndstongue
6. Leafy spurge
7. Musk thistle
8. Palmer amaranth
9. Purple loosestrife
10. Russian knapweed
11. Saltcedar
12. Spotted knapweed
13. Yellow toadflax

Also, counties and cities do have the option to add additional weeds onto a list for enhancement only in their jurisdiction. Depending on where you live, there may be more than the state's 13 noxious weeds to legally control and manage.

Who controls noxious weeds?
North Dakota law requires every person to do all things necessary and proper to control the spread of noxious weeds. The North Dakota Department of Agriculture (NDDA) coordinates the efforts of county and city weed boards and state and federal land managers to implement integrated weed management programs. County and city weed boards are in control of enforcement of laws and regulations when it comes to noxious weeds.

Is there funding for landowners who have noxious weeds?
Yes, the Landowner Assistance Program (LAP) distributes funds to weed boards for controlling noxious weeds on the state and county lists. Historically, a majority of weed boards have used LAP funds to provide landowners with herbicide cost-share assistance. For more LAP information in your county, please contact your county weed officer or NDDA.

What are good ways to manage noxious weeds?
Prevention is the first line of defense. Knowing common pathways that noxious weeds can be introduced is the key to mitigate risk from noxious weeds growing on your land. Early detection and rapid response (EDRR) is sometimes considered the second line of defense after prevention. EDRR is a critical component of any effective invasive species management program. When new invasive species infestations are detected, a prompt and coordinated

containment and eradication response can reduce environmental and economic impacts. This action results in lower cost and less resource damage than implementing a long-term control program after the species is established.

Integrated pest management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of pest control and practices. Biocontrol is an important tool in an IPM system. In hard to reach or environmentally sensitive areas, biocontrol can broaden the scope and level of weed control and help reduce the risk of noxious weed invasion. NDDA promotes the collection and redistribution of biological control agents by providing advice, resources and information.

Who do I contact for noxious weed issues?
Contact your county weed officer or county extension agent. Either can help establish what is present while providing control methods and management practices that will help your situation if you have one. For more information regarding the North Dakota Department of Agriculture contact Richard Weisz, Noxious Weed Specialist at 701-328-2250.

NDSU Woody Plant Improvement Program Introduces its 60th Introduction

By Dr. Todd West (reprinted with permission)

A new woody plant selection, KoolKat™ Katsura Tree (*Cercidiphyllum japonicum* 'KoolDak'), was introduced by the North Dakota Agricultural Experiment Station and the North Dakota State University Research Foundation. This is the 60th new plant release developed by the NDSU Woody Plant Improvement Program led by Dr. Todd West.

Kool Kat summer foliage, Todd West

Kool Kat fall color, Todd West

KoolKat™ is a single plant seedling selection originating from a population of *Cercidiphyllum japonicum* acquired from the Lesny Zaklad Doswiadgzalny W. Rogowie Arboretum in Rogów, Poland. Seed was acquired in 1999 and designated as TS9946. The trees in this population were part of the NDSU Woody Plant Statewide Cooperative Evaluation Program that ran from 1987 to 2007.

Kool Kat flowers, Todd West

KoolKat™ is a cold-hardy selection that has survived without damage in USDA climatic zone 3a at temperatures as low as -37 degrees Fahrenheit. This single plant selection is unique in that it has early fall dormancy compared to the species, which aids in increasing the winter hardiness. All other traits are similar to the species, with cordate (heart) shaped leaves emerging reddish-purple in the spring and changing to blue-green as they mature for summer. In autumn, fall color is yellow to apricot in color depending on the year.

KoolKat™ is dioecious and is a female selection, possessing only female flowers. Mature height will be 35 to 40 feet with a width of 20 to 25 feet.

Invasive Forest Pest Update

North Dakota Department of Agriculture received funding for forest pest outreach in 2020. Due to the COVID-19 pandemic, we were not able to attend as many outreach events as we had planned, since most in-person activities were cancelled. We were however able to do some advertising and printing. Included with your nursery license are a couple posters that have been created. The North Dakota Nursery, Greenhouse, and Landscape Association also provided review of the posters. Together we encourage you to place the posters prominently in your nursery. If you would like more posters for other places of outreach, please let me know! We would be glad to provide more material. We also have various other outreach materials including emerald ash borer and Japanese beetle ID cards and fact sheets.

Emerald Ash Borer Update

Emerald Ash Borer (EAB) has still NOT been found in North Dakota. In 2020, Traps were again placed across the state. Nearly 400 traps were placed in May/June, serviced in July, and removed in August. No suspect beetles were submitted. Last year at this time, I wrote that we were anticipating the federal de-regulation of EAB. As of the writing of this newsletter, the de-regulation announcement has been signed and published. The de-regulation will be official on Jan. 14, 2021. North Dakota will continue to regulate EAB. Neighboring states of Minnesota, South Dakota, and Montana are all or will be regulating EAB as well. For more information on North Dakota's EAB quarantine or various forest pest outreach information, visit our firewood website at www.nd.gov/ndda/firewood.

Japanese Beetle Update

NDDA continues to monitor for Japanese beetle (JB). Since it's introduction into North Dakota in 2012 in nursery stock shipments, we have caught beetles annually. This year was no different, as 402 beetles were caught across the state. 520 traps were placed in 42 counties. Of these traps, 72 of the traps caught at least 1 beetle. Unique about this year was the majority of traps at nurseries caught very few or no beetles at all. Parks and golf courses had the highest beetle catches. This is concerning, as it shows that populations may be establishing. Only 9 counties had positive traps. These include Burleigh, Cass, Grand Forks, Morton, Oliver, Richland, Walsh, Stutsman, and Ward. Oliver, Richland, and Walsh only had 1 beetle caught total. Only 4 traps had 53% of the total beetles caught in North Dakota and the top 11 traps had 75% of the beetles caught in the whole state. A full report is available on our nursery website at https://www.nd.gov/ndda/program/nursery-program.

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