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Why Lincoln Needs to get Ahead of the Emerald Ash Borer Outbreak

Bryce Meyer

University of Nebraska-Lincoln, bryceralphmeyer@gmail.com

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Bryce Meyer
ENSC 230
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Why Lincoln Needs to get Ahead of the Emerald Ash Borer Outbreak

The emerald ash borer was recently sighted in Lincoln, Nebraska this August. This was to be expected as they were also located in Douglas and Cass county. The emerald ash borer has been making its way west from Michigan and has also been detected in 61 counties in Iowa.

The emerald ash borer is a metallic green colored beetle that feeds on green ash, black ash, blue ash, and white ash trees. The insect can kill up to 99% of the ash trees that they come in contact with. The beetle is native to north-eastern Asia and is considered an invasive species in the U.S.

The females lay their eggs on top of the ash tree's bark where the eggs hatch and the proceed to bore into the ash tree. The insect then feeds on the tissue of the tree which leads to the ash tree not being able to move the required nutrients and water throughout the trunk. After about a year the full-grown emerald ash borer emerges from the tree.

The insect was first discovered in southeastern Michigan in 2002. It's suspected that the emerald ash borer first arrived in the U.S. from wood packing material that was stored in cargo ships from Asia.

Plans to limit the pest's impact on Lincoln's ash trees have already been set in motion. Lincoln has already removed about 2,000 of the estimated 14,000 ash trees in city-owned areas.

However, this is only a drop in the bucket when you take into consideration that there is upwards of 40,000 ash trees on private property in Lincoln.

The city of Lincoln has only made plans to cut down and remove about 1,000 of the 14,000 ash trees on city-owned property. This is estimated to cost as much as 22.8 million dollars. This still leaves thousands of ash trees unaccounted for.

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The negative effects of the emerald ash borer are far reaching and can include other problems such as safety concerns from falling tree limbs, electrical lines being knocked down, declining property values, and other esthetic reasons.

The city of Lincoln has a responsibility to help inform home owners affected by the outbreak on how to rid their ash trees of the pest. One effective method for killing the emerald ash borer is by water the surrounding soil around the tree with insecticide that contains the active ingredient imidacloprid. This method is estimated to cost 130 dollars per treatment. The ash tree requires to be treated once a year for five years. That's a total of 650 dollars per ash tree and there's still no guarantee that this treatment would get rid of the infestation. Since Lincoln has 40,000,000 ash trees it could cost 26 million dollars to treat every ash tree.

The city of Lincoln and Nebraska needs to start investigating the possibility of releasing different insect species that eat the emerald ash borer. This would be the most effective way of getting rid of all the emerald ash borers.

Some of the insects include the *Tetrastichus planipennis* and *Spathius galinae*. Both these species have been imported from China and were approved for release by the USDA in 2015.

The *Tetrastichus planipennis* has already been released in Michigan and has had limited success on killing the emerald ash borer. This method is still being researched and the desired results aren't guaranteed due to the possibility of the imported insects negatively affecting the Nebraskan ecosystem.

If Lincoln lets every ash tree die it is estimated to cost a minimum of 150 dollars per ash tree to cut down. That's a total of 6 million dollars to cut down every ash tree. Then to replace those trees it would cost roughly 75 dollars per tree to replace. That comes out to a total of 3 million

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dollars to replace every ash tree. These costs will be incurred by the homeowners and not the city of Lincoln.

Lincoln needs to focus on issuing more quarantines on the affected areas and stop the selling of ash nursery trees from being sold. The transportation of firewood that also could contain the emerald ash borer needs to be limited to prevent humans spreading it to new locations.

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