Emerald Ash Borer Confirmed in South Dakota.

What does that mean for SD communities?

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The emerald ash borer has finally been confirmed in South Dakota. This is not too surprising considering it was discovered in Iowa and Minnesota in the past decade, eastern Nebraska the past year and Winnipeg just six months beforehand. We were due.

We have been awaiting the arrival of this invasive threat since its initial discovery in the Detroit Michigan area back in 2002. The borer was discovered that year as the cause for the recent loss of thousands of ash trees throughout the Detroit metro area. At first no one knew where the insect was from, but entomologists traced it back to the forests of Northeastern China. Since 2002 the insect has spread to more than 30 states and the adjacent Canadian provinces. Almost 100 million ash trees have been killed in North American by this insect.

The insect is not a threat to the forest of China. It is native there and if a tree is healthy, the beetle cannot successfully attack it. However, once the insect arrived in our country, it found hosts – black ash, green ash and white ash – that have no defenses against the borer and are easily attacked and killed.

The emerald ash borer is a notable concern to South Dakota as our state has one of the highest populations of ash trees. Ash is about 30 to 40 percent of the shade trees in our towns and cities and about 20 to 30 percent of the trees in the shelterbelts across the state. We have planted far too many ashes in the state and are about to pay dearly for this mistake.

The emerald ash borer kills every tree it attacks, none survive the infestation. The insect is also adapted to our climate having come from a similar climate in Asia. There is no reason to think that our ash trees will be spared. It will kill them as quickly as it has in the other states.

While the borer has only been confirmed in Sioux Falls, most likely it will spread into the surrounding counties within five years and be in the Black Hills and most of eastern South Dakota within a decade and cover the entire state within 20 years. In its wake will be thousands of dead ash trees.

The emerald ash borer takes about five years of repeated attacks to kill a tree. They leave once the tree is dead as it no longer can provide suitable food for their young, the white, worm-like, larvae that feed just beneath the bark. Once the tree dies, it falls very quickly, and this is a major problem when managing emerald ash borer.

Trees killed by emerald ash borer have been described in two words, brittle and unpredictable. The wood quickly dries out, much faster than what typically occurs with dying trees, and this dramatically reduces the wood strength. Cutting a dead ash down has generally been a relatively safe task, for those trained in tree felling, but now we will be faced with trees that may collapse when the saw first starts cutting into the wood, rather than after the notch and back cut have been finished.

There have been instances in other states where trees killed by emerald ash borer have collapsed when a pull rope has been attached, even before the cuts have been started. These trees have also fallen just due to the machinery, such as aerial lifts and chippers, that have been driven up to the tree and the soil vibrations have been enough to cause the failure.

Since the roots die before the top does, chain saw operators have also had the entire tree uproot while they are attempting to fell it. Many tree companies out East do not remove infested trees that have 50 percent dieback. The only safe means of removing trees that are standing dead or have more than 50 percent dieback due to the beetles is to push the trees over.

Therefore, now is the time for action in communities across the state. Since the beetle will be found in every community within the next 5 to 20 years, now is the time to begin remove unwanted ash trees. There are very effective treatments to protect ash trees from the borer but these need to be repeated every two years for an indefinite period – essentially the lifetime of the tree. Most ash tree owners do not continue treating much beyond six years and most communities do not have the funds to commit to the long-term injections of their ash.

If the trees are not going to be treated, now is the time to begin the gradual process of remove ash trees. Sioux Falls is already beginning to remove ash trees that are not infested as well as the infested ones. The plan is to cut as many trees as possible now, so they can avoid having to remove thousands of trees in a short period.

The “death curve” as it is called, the accumulative loss of ash trees in a community over time starts very slowly and speeds up. Sioux Falls has about 85,000 ash trees. They have lost about 300 trees to the borer so far. If they do nothing, they will lose about another 12,000 over the next four or five years. This is certainly manageable for the city to handle, removing about 3,000 trees per year. However, the real problem comes later.

The curve quickly climbs after four or five years, and the remaining 75,000 trees will be infested and killed within the following three to four years, about 20,000 trees lost per year! This is far more than a city can handle and if they do not keep up with removals, they will have standing dead trees falling into the streets – not an acceptable situation.

Sioux Falls is planning to get ahead of this curve by removing infested trees and healthy ash trees that no one is planning to treat. Doing so now will help them avoid being overwhelmed by removals five or so years from now.

Other communities should consider beginning soon as well. A town with 2,000 street and park ash trees could start removing 200 a year now and perhaps have the job completed before the borer arrives in their community or already made a significant reduction in numbers.

That is far better than suddenly being faced with the removal of all the trees within five years or so, 400 to 500 a year and having many of those be dangerous fells as they are already infested.

The beetle has arrived in our state and it will kill every untreated ash tree in every South Dakota community. Now is the time to begin putting plans into action.

Dr. John Ball currently serves SDSU Extension as a resident forestry specialist. He regularly shares his expert advice both in articles on the iGrow website and on YouTube through a series of informational videos on forestry and gardening.