



Preparing for the Emerald Ash Borer at Kansas State University



**Native Range: Russian Far East
Mongolia, China, Japan, Korea, Taiwan**



All species of ash (*Fraxinus* spp.) attacked by EAB



White ash



Green ash



Blue ash



Black ash

and *all horticultural cultivars* of
these species.

What's At Risk?

2006

2009



Ash trees lining a street before (left) and after (right) they were decimated by EAB.

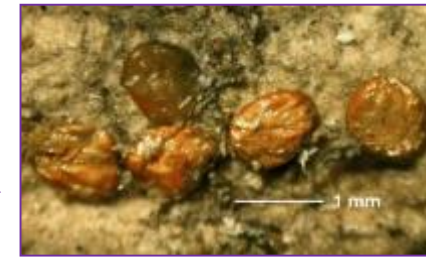


**31 States + D.C. Initial detection in SE Michigan near Detroit, Summer 2002
Wyandotte, Johnson, Leavenworth, Douglas, Jefferson, Atchison, Doniphan,
and Shawnee Counties (2012-2017)**

Life Cycle: Typically 1 Gen/Year

Adults breed within 7 to 10 days

Hatch in 7-9 days. Females mate several times. Avg. 77 eggs laid in crevices.



Adults: May - July

Eggs: May - July



Pupa:
April - June



Prepupa:
Oct - April



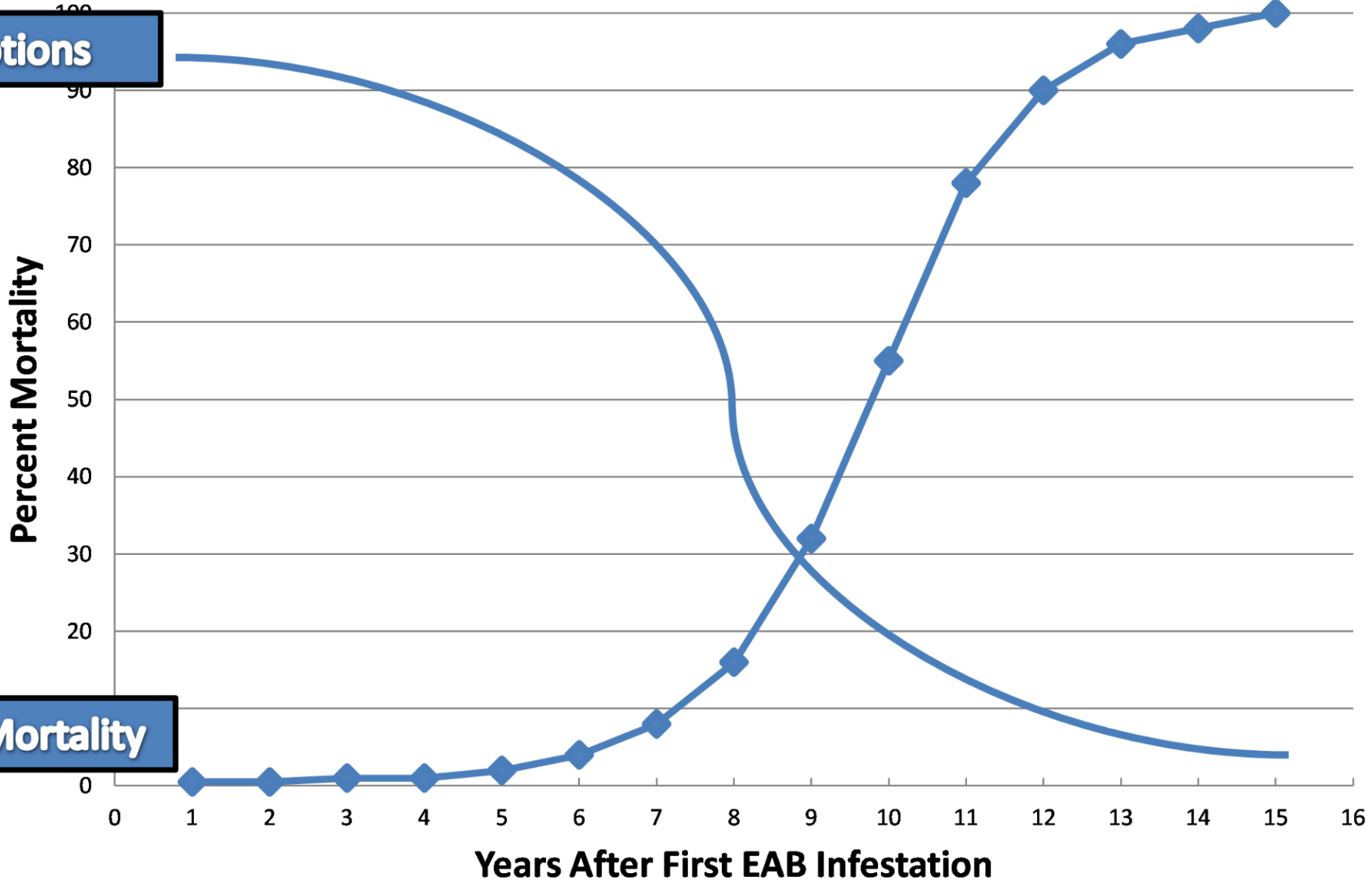
Larva: June - Oct.



Ash Mortality from EAB

Options

EAB Mortality



K-State Ash Inventories

Ash Tree Locations - Manhattan



Ash Tree Locations - Polytechnic



July 2017



Summarized Ash Tree Data

Manhattan Campus

Inventoried July 17, 2017

	Diameter by Range									Total Trees	Value
	0 to 5.99"	6" to 11.99"	12" to 17.99"	18" to 23.99"	24" to 29.99"	30" to 35.99"	36" to 41.99"	42" to 47.99"	48+"		
Good Condition											
All Ash	3	28	28	13	7		1	1		81	
Est. Value	\$162	\$13,692	\$37,996	\$34,580	\$30,779		\$9,174	\$12,215			\$138,598
Fair Condition											
All Ash	1	24	55	30	9	3				122	
Est. Value	\$36	\$7,824	\$49,775	\$53,190	\$26,379	\$13,137					\$150,341
Poor Condition											
All Ash	5	7	20	12	2					46	
Est. Value	\$90	\$1,141	\$9,040	\$10,644	\$2,932						\$23,847
Dead Ash		1	1							2	\$0
TOTAL	9	60	104	55	18	3	1	1	0	251	\$312,786

Summarized Ash Tree Data

Polytechnic Campus

Inventoried January 19, 2018

	Diameter by Range									Total Trees	Value
	0 to 5.99"	6" to 11.99"	12" to 17.99"	18" to 23.99"	24" to 29.99"	30" to 35.99"	36" to 41.99"	42" to 47.99"	48+"		
Good Condition											
All Ash		1								1	
Est. Value		\$489									\$489
Fair Condition											
All Ash		1	1							2	
Est. Value		\$326	\$905								\$1,231
Poor Condition											
All Ash		3	1	2						6	
Est. Value		\$489	\$452	\$1,774							\$2,715
TOTAL		5	2	2						9	\$4,435

Action Plan Highlights

- ❑ Polytech: **9 Trees**: 6 poor, 2 fair, 1 good condition
- ❑ MHK: **251 Trees**: 2 dead, 46 poor, 122 fair, 81 good condition
- ❑ Highlights:
 - 5 Year Management Cycle
 - Remove dead (already done), poor, fair trees, and good trees in poor locations
 - Plant 2 trees for every tree removed (not necessarily where ash are removed)
 - Treat historic, iconic, large healthy specimens when EAB 15 miles from campus
 - Treat good trees in prime locations
 - Utilize good quality logs
 - Communication strategy for alumni, students, faculty and staff, University and campus leadership, general public
 - Annual review of plan and strategy

EAB Readiness Team Members

Ryan Swanson	Associate Vice-President of Facilities and University Architect
Kevin Schindlbeck	Director of Facilities Services
Joe Myers	Facilities Grounds Maintenance Supervisor
Mark Taussig	Landscape Architect, Campus Planning and Project Management
Skyler Harper	Associate Director, Department of Housing and Dining
Scott McElwain	Director, Kansas State University Gardens
Charles Barden	Professor, Horticulture and Natural Resources
Cheryl Boyer	Associate Professor, Horticulture and Natural Resources
Greg Davis	Associate Professor, Horticulture and Natural Resources
Cathie Lavis	Professor, Horticulture and Natural Resources, Tree Campus USA Chair
Chad Miller	Associate Professor, Horticulture and Natural Resources
Ray Cloyd	Professor, Entomology
Chip Winslow	Professor, Landscape Architecture/Regional and Community Planning
Lee Skabelund	Professor, Landscape Architecture/Regional and Community Planning
Judy O'Mara	Instructor and Diagnostician, Plant Pathology
Chandler Day	Graduate Student, Plant Pathology
Kim Bomberger	Community District Forester, Kansas Forest Service
Randy James	Consulting Arborist, Tree BioLogics and Growing Concerns
J. David Mattox	City Forester, City of Manhattan





0%



10%



20%



30%



40%



50%



60%



70%



80%



90%



100%

When treating any tree with **$\geq 30\%$ canopy thinning and/or dieback** tree condition may compromise treatment effectiveness

