

Significance, Impact and Management of Oak Wilt over Six Decades

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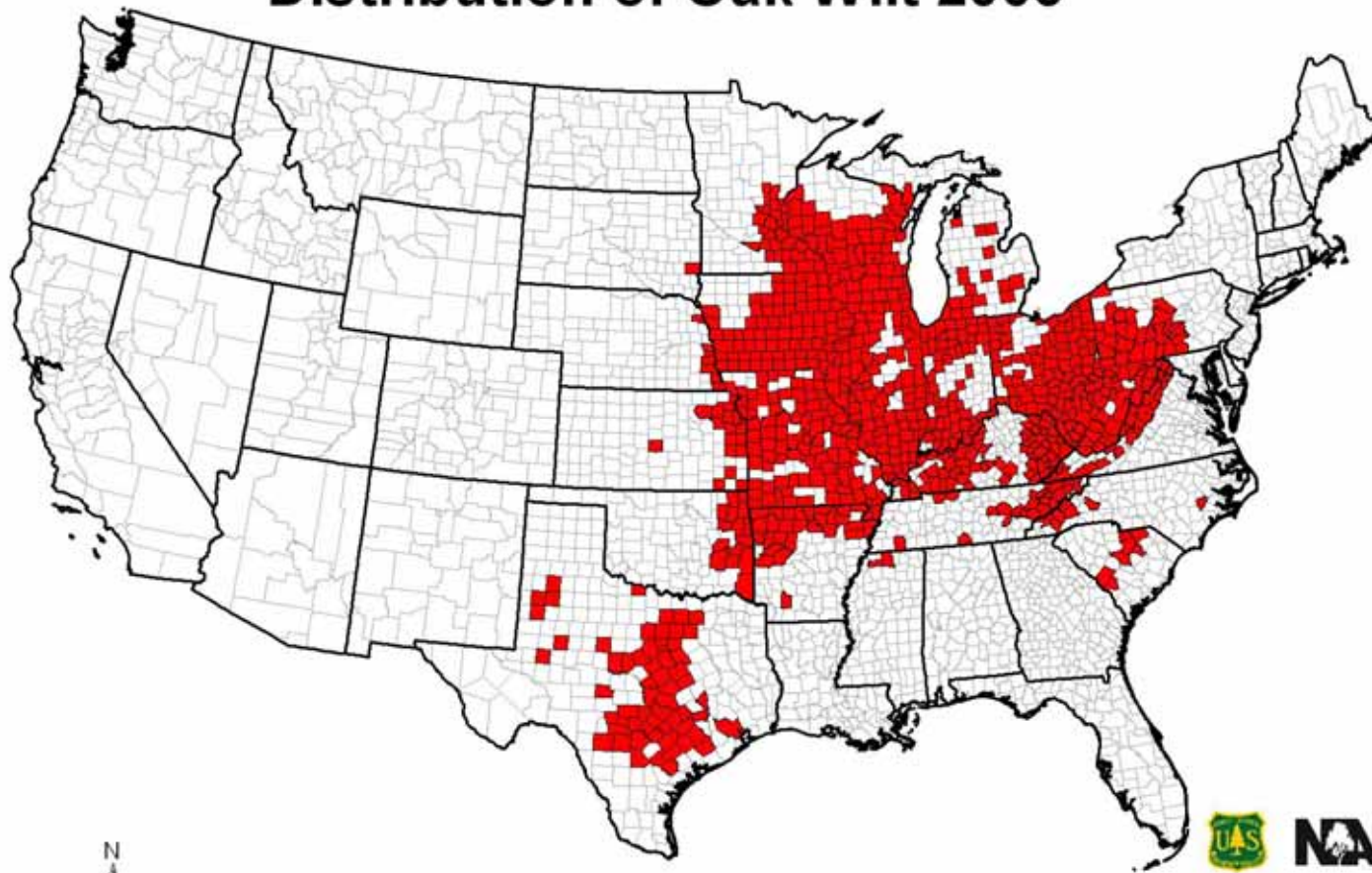
Distribution since discovery

Distribution of Oak Wilt 2003

2003



Reported
in 22 states



400 0 400 800 Miles



Map Produced by:
Q. Chavez 1/04

Comments on distribution

- **Extensive expansion in range 1944 – 1951 likely a result of disease recognition rather than disease spread**
- **Range expansion since**
 - **Texas – first detected 1961, but likely present before; westward and southward expansion within state since.**
 - **Minnesota – estimated 5 – 7 mi N and 12 – 14 mi westward expansion per year**
 - **Michigan – spread to the UP from WI first detected in late 1970's**
- **Intensification within rural and urban areas is occurring in parts of the disease range today.**

Significance/Concern

1944 1950 1960 1970 1980 1990 2000

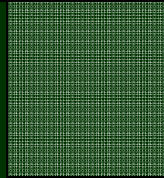


Henry, et al.
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- Timber concerns
- Recent experience with exotic pathogens

Significance/Concern

1944 1950 1960 1970 1980 1990 2000



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- Regulatory concerns
- Extent of OW distribution and its impact in Texas

Significance/Concern

1944

1950

1960

1970

1980


1990

2000




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• Impact on urban
and peri-urban forests

An aerial photograph of a rural forest. The forest is mostly green, but there are large, irregular patches of yellow and brown, indicating extensive oak wilt mortality. A road or path runs through the forest.

Extensive oak wilt mortality in rural forest.

Impact

An aerial photograph of a peri-urban forest. The forest is mostly green, but there are large, irregular patches of yellow and brown, indicating extensive oak wilt mortality. The forest is surrounded by agricultural fields, a road, and some buildings.

Extensive oak wilt mortality in peri-urban forest.

Impact: 1950's and 1960's

State	Time period	No. affected counties	No. active OW centers	No. dead trees
WV	1951 - 1977	51	--	57,740
	1964 - 1968	--	2,047 to 3,011 (ann.)	--
PA	1950 -1954	21	1,246 (cum.)	--
	1964 - 1968	--	261 - 294 (ann.)	--
NC/TN	1951 - 1956	19 (survey)	250	--
	1951 - 1956	3 (study)	111	579

Impact: late 1980's to present

State	Time period	No. counties	No. OW centers	Area affected
				(acres)
MN	1999	19	22,335	10,929
TX	1988 - 2004	65	6,742	--

Control programs: 1950's and 1960's

State	Total costs (\$ 1,000's)	No. trees "saved"/yr (treated)	Est'd no.trees wilted / yr (non-treated)
NC	34.4	72	144
PA	234	2,855	3,717
WV	507.6	2,483	5,354

Control programs: late 1980's to present

Time period	Costs	Report year	No. twp.	No. disease centers	Percent treated
1991 - 1997	\$1.95 M (fed)	1997	79	8,387	61.5
	\$ 3 M (match)				

Target statistic: No. of disease centers reduced from 2.97 per sq. mi. in 1991 to 1.58 per sq. mi. by 1997.

Control programs: late 1980's to present

Time period	Costs	Report year	No. grantees	No. acres treated	No. acres active
	\$1.09 M	2005	7 counties		
2002/	(fed)		23 comm.	6,682	4,247
2004	\$ 0.5 M	2005	1 county		
	(state)		44 comm.		
			21 local		

Concluding Remarks

- **Disease range**
- **Reasons for concern about oak wilt**
- **Control / Suppression Programs**
 - **Setting reasonable goals based on sound objectives**
 - **Appropriate assessment of program effectiveness**

