

# 18TH ANNUAL OHIO MAST SURVEY RESULTS



**TABLE 1.**  
PERCENTAGE OF  
WHITE AND RED OAK  
TREES WITH ACORNS  
ON 38 WILDLIFE  
AREAS DURING THE  
2022 MAST SURVEY.

WILDLIFE AREA	DISTRICT	% TREES WITH ACORNS WHITE OAKS	RED OAKS	NORTH TO SOUTH RANKING
LAKE LA SU AN	2	12	28	1
DORSET	3	28	32	2
NEW LYME	3	28	40	3
MOSQUITO CREEK	3	36	60	4
OWBOW LAKE	2	36	56	5
MILAN	2	4	24	6
GRAND RIVER	3	40	40	7
CAMP BELDEN	3	8	8	8
BERLIN LAKE	3	12	12	9
KILLDEER PLAINS	2	68	96	10
KILLBUCK MARSH	3	-	-	11
HIGHLANDTOWN	3	28	32	12
BIG ISLAND	1	56	100	13
BEACH CITY	3	48	60	14
BRUSH CREEK	3	44	36	15
KOKOSING	1	96	52	16
DELAWARE	1	48	52	17
WOODBURY	4	28	32	18
EGYPT VALLEY	4	36	48	19
SALT FORK	4	40	40	20
MONROE LAKE	4	20	40	21
WOODLAND TRAILS	5	56	60	22
ALES RUN	4	68	24	23
DEER CREEK	1	8	4	24
WOLF CREEK	4	56	28	25
TRIMBLE	4	52	32	26
PLEASANT VALLEY	4	36	28	27
ROSS LAKE	4	-	-	28
WATERLOO	4	32	20	29
ACADIA CLIFFS	4	68	36	30
FALLSVILLE	5	28	68	31
FOX LAKE	4	28	12	32
WELLSTON	4	44	24	33
EAST FORK	5	28	20	34
TRANQUILITY	5	84	40	35
COOPER HOLLOW	4	12	24	36
TYCOON LAKE	4	16	12	37
CROWN CITY	4	60	28	38
TOTALS		38.7	37.4	Mean
		21.8	21.7	Stdev
		56.4	57.9	CV
		3.5	3.5	SE
		31.7	30.6	L 95
		45.6	44.3	U 95



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**TABLE 2.**

PERCENTAGE OF  
WHITE OAK TREES  
WITH ACORNS ON 38  
WILDLIFE AREAS, 2012  
TO PRESENT.

WILDLIFE AREA	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
LAKE LA SU AN	32	32	28	4	32	44	84	8	8	68	12
DORSET	72	16	72	56	28	40	52	20	28	36	28
NEW LYME	64	24	64	48	28	20	40	16	24	44	28
MOSQUITO CREEK	88	12	76	56	20	24	60	28	36	56	36
OXBOW LAKE	40	20	24	28	40	32	56	40	28	32	36
MILAN	36	36	96	40	52	12	48	12	0	44	4
GRAND RIVER	8	20	28	52	40	36	52	36	52	36	40
CAMP BELDEN	48		60	28	20	0	64	0	48	28	8
BERLIN LAKE	40	24	20	44	36	24	40	8	16	24	12
KILLDEER PLAINS	68	56	96	40	64	68	88	16	56	80	68
KILLBUCK MARSH	20		40	44	32	36	44	48	48	48	-
HIGHLANDTOWN	4	8	40	16	44	36	68	4	8	28	28
BIG ISLAND	80	100	88	64	44	84	64	32	56	72	56
BEACH CITY	16	8	24	36	64		84	36	20	88	48
BRUSH CREEK	68	60	68	28	72	44	92	20	28	48	44
KOKOSING	28	8	44	24	68	60	72	28	76	32	96
DELAWARE	40	28	92	32	40	60	60	52	36	80	48
WOODBURY	44	12	64	24	32	0	56	0	0	20	28
EGYPT VALLEY	72	36	44	24	32	40	52	12	16	24	36
SALT FORK	92	40	60	24	40	64	56	24	36	32	40
MONROE LAKE	84	44	20	48	36	60	52	24	28	28	20
WOODLAND TRAILS	84	64	88	80	8	52	56	64	60	60	56
ALES RUN	88	12	64	16	52	24	84	12	12	64	68
DEER CREEK	4	0	16	0	0	0	12	12	8	0	8
WOLF CREEK	64	4	60	8	40	16	76	8	4	20	56
TRIMBLE	84	24	92	20	36	28	64	8	16	48	52
PLEASANT VALLEY	32	0	4	8	4	0	8	4	4	4	36
ROSS LAKE	32	0	36	4	44	4	24	0	16	8	-
WATERLOO	60	12	100	4	32	8	60	40	28	76	32
ACADIA CLIFFS	68	0	52	8	60	20	60	12	20	44	68
FALLSVILLE	48	8	16	16	24	8	16	4	8	36	28
FOX LAKE	52	8	72	24	16	4	28	12	52	16	28
WELLSTON	60	0	72	8	36	0	40	4	48	20	44
EAST FORK	60	24	48	36	24	24	36	36	40	28	28
TRANQUILITY	48	12	8	12	40	4	52	4	48	4	84
COOPER HOLLOW	52	8	56	20	40	12	20	36	0	52	12
TYCOON LAKE	48	0	32	20	16	12	4	40	0	36	16
CROWN CITY	48	12	24	68	36	60	4	68	4	40	60



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**TABLE 3.**

PERCENTAGE OF  
RED OAK TREES  
WITH ACORNS ON  
38 WILDLIFE AREAS,  
2012 TO PRESENT.

WILDLIFE AREA	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
LAKE LA SU AN	44	60	48	80	60	8	84	16	76	96	28
DORSET	24	80	16	76	68	68	40	36	36	48	32
NEW LYME	16	72	28	72	60	40	32	44	48	44	40
MOSQUITO CREEK	16	88	16	88	72	40	36	56	56	64	60
OXBOW LAKE	48	60	64	40	44	52	40	60	68	80	56
MILAN	52	52	48	92	28	32	8	56	28	12	24
GRAND RIVER	48	24	36	44	52	24	60	88	76	32	40
CAMP BELDEN	8	88	0	100	36	16	28	92	100	40	8
BERLIN LAKE	20	32	32	16	24	24	24	20	28	4	12
KILLDEER PLAINS	84	96	96	80	76	68	88	76	92	92	96
KILLBUCK MARSH	28	72	0	60	36	48	48	68	68	48	-
HIGHLANDTOWN	64	80	24	60	64	64	56	44	100	60	32
BIG ISLAND	100	88	100	84	100	56	100	100	92	80	100
BEACH CITY	36	8	4	8	40	40	0	84	28	76	60
BRUSH CREEK	56	80	36	52	40	80	84	20	88	60	36
KOKOSING	12	24	0	60	48	24	36	92	32	100	52
DELAWARE	52	60	60	96	56	64	64	92	76	88	52
WOODBURY	80	64	12	68	48	48	52	56	72	60	32
EGYPT VALLEY	28	68	32	56	32	44	48	36	60	40	48
SALT FORK	12	92	28	52	40	20	80	56	56	44	40
MONROE LAKE	44	88	28	16	48	52	68	44	60	44	40
WOODLAND TRAILS	84	52	36	92	92	0	56	64	64	60	60
ALES RUN	88	100	52	80	60	60	56	96	100	64	24
DEER CREEK	44	4	0	28	0	8	12	8	8	0	4
WOLF CREEK	84	80	36	96	36	36	64	64	88	68	28
TRIMBLE	88	92	32	100	48	72	80	80	100	84	32
PLEASANT VALLEY	72	28	0	36	0	8	20	20	28	16	28
ROSS LAKE	52	68	32	64	12	80	64	40	80	16	-
WATERLOO	84	88	44	100	36	56	44	60	84	76	20
ACADIA CLIFFS	88	96	8	92	28	52	52	96	96	56	36
FALLSVILLE	88	16	76	24	68	52	56	92	76	8	68
FOX LAKE	84	84	32	92	44	36	84	80	80	40	12
WELLSTON	52	68	16	68	20	52	56	76	56	28	24
EAST FORK	84	92	56	84	12	60	48	84	80	12	20
TRANQUILITY	96	52	28	56	36	36	76	76	84	20	40
COOPER HOLLOW	92	96	32	96	0	44	88	88	96	48	24
TYCOON LAKE	64	84	32	88	0	16	76	88	96	28	12
CROWN CITY	84	60	20	80	4	40	96	96	96	32	28



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**TABLE 4.**  
AVERAGE OF THE  
PERCENT OF THE  
CROWN WITH ACORNS  
FOR WHITE OAK TREES  
ON 38 WILDLIFE AREAS,  
2012 TO PRESENT.

WILDLIFE AREA	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
LAKE LA SU AN	1.6	2.2	2.0	0.2	2.0	4.4	15.6	0.4	0.4	7.6	0.6
DORSET	11.6	1.0	7.6	8.2	4.4	5.4	10.8	3.4	7	7.8	4.28
NEW LYME	14.2	1.4	7.2	13.0	6.0	3.8	8.6	2.8	5	9.6	4.4
MOSQUITO CREEK	24.8	0.6	23.4	15.2	4.6	4.0	18.6	5.4	5.6	13	3.6
OXBOW LAKE	2.8	1.2	1.6	1.4	2.4	2.0	3.4	3	1.6	2.8	7
MILAN	3.2	2.4	6.8	3.6	3.6	0.6	4.0	0.6	0	3.6	0.2
GRAND RIVER	0.4	1.2	3.6	2.8	4.8	2.4	4.0	2.4	3.6	5.6	4.4
CAMP BELDEN	14.6		29.0	14.0	10.0	0.0	36.0	0	6.6	1.6	0.4
BERLIN LAKE	3.6	2.2	2.8	3.6	5.4	1.6	9.6	0.8	0.8	2.2	1.4
KILLDEER PLAINS	29.8	22.0	42.9	5.4	13.0	22.4	29.6	2	10	23.4	8
KILLBUCK MARSH	5.6		5.8	6.4	7.6	13.6	8.4	11.6	8.8	11.8	
HIGHLANDTOWN	1.6	1.2	5.6	1.6	9.2	10.2	16.4	0.4	0.8	7	4.8
BIG ISLAND	15.2	38.6	35.6	4.2	6.4	34.8	4.6	1.8	8.8	7	3.4
BEACH CITY	1.0	0.4	3.4	3.2	9.2		50.0	17	10	46	24
BRUSH CREEK	21.8	6.0	19.6	1.6	10.6	4.8	28.0	1.4	2.2	9.4	7.6
KOKOSING	3.8	1.8	4.8	1.8	7.6	7.4	19.6	2	24	2.6	25.4
DELAWARE	7.6	2.6	18.2	3.2	7.0	7.8	12.6	4.4	7.2	10	8
WOODBURY	18.6	1.0	8.0	0.4	1.5	0.0	15.4	0	0	1.6	8.4
EGYPT VALLEY	37.8	9.4	16.8	4.6	8.4	17.6	23.0	3.8	4.6	7	8.2
SALT FORK	55.4	7.8	23.8	5.6	12.6	34.6	35.2	6	7.8	11	13.8
MONROE LAKE	45.0	12.8	4.6	5.8	7.8	30.8	19.0	4.8	8.2	10	5.4
WOODLAND TRAILS	15.4	5.4	7.0	13.2	0.4	4.6	8.8	7.4	9.8	7.4	5.4
ALES RUN	18.8	0.6	13.0	1.0	11.4	2.0	52.8	0.6	2.4	26.8	7.8
DEER CREEK	0.2	0.0	1.0	0.0	0.0	0.0	0.6	0.6	0.4	0	0.4
WOLF CREEK	11.2	0.2	9.4	0.4	6.6	3.8	34.0	0.6	0.2	3	13
TRIMBLE	14.4	2.0	38.6	1.4	2.2	2.2	17.6	1.8	3.4	18	11
PLEASANT VALLEY	2.0	0.0	0.2	0.6	0.2	0.0	0.4	0.2	0.2	1	7.2
ROSS LAKE	12.0	0.0	15.4	0.6	15.2	2.0	13.0	0	7.44	3.6	
WATERLOO	27.0	0.6	36.0	0.4	2.6	0.6	16.8	4	7.4	29.4	7
ACADIA CLIFFS	8.4	0.0	19.0	0.4	19.2	2.8	18.2	0.6	1.2	10.8	14.4
FALLSVILLE	19.6	3.2	1.6	0.8	4.6	0.4	2.8	0.4	0.6	12.2	8.2
FOX LAKE	12.0	0.4	31.8	1.2	1.2	1.2	1.8	0.6	7.8	3.8	4.6
WELLSTON	28.4	0.0	42.6	1.0	15.2	0.0	23.8	0.8	24.4	8.2	22
EAST FORK	6.2	1.4	21.8	8.2	9.4	0.2	9.2	2.6	19.6	12.2	2
TRANQUILITY	23.2	1.4	0.4	3.0	4.4	0.2	8.6	0.4	12.2	0.4	28
COOPER HOLLOW	26.8	4.2	17.8	8.8	14.6	4.2	10.8	19	0	26	2.4
TYCOON LAKE	26.0	0.0	7.8	6.0	2.2	4.0	0.4	12.4	0	11.4	5.6
CROWN CITY	27.4	1.0	5.0	33.6	12.0	33.4	3.0	35	1	16.8	43.8
MEAN	15.8	3.8	14.2	4.9	7.0	7.3	15.7	4.2	5.8	10.3	9.1
STDEV	13.0	7.4	12.8	6.3	4.8	10.4	13.1	6.8	6.2	9.5	9.2



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# SURVEY RESULTS



**TABLE 5.**

AVERAGE OF THE  
PERCENT OF THE  
CROWN WITH ACORNS  
FOR RED OAK TREES  
ON 38 WILDLIFE AREAS,  
2012 TO PRESENT.

WILDLIFE AREA	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
LAKE LA SU AN	3.4	3.8	14	5.4	0.4	23.2	28.2	0.8	20.8	43.2	2.6
DORSET	14.2	1.0	25.8	24.2	9.4	11	15.6	8.2	12.2	13.6	5.6
NEW LYME	16.8	2.0	14.2	17.4	9.2	7.44	12.8	12.6	14.6	13	5.2
MOSQUITO CREEK	26.6	5.2	42.6	28.8	18.4	10.4	21.6	18.2	18.4	20.2	11.6
OXBOW LAKE	7.2	5.6	3.2	3.4	4.2	3	8.4	10.6	17.4	31.4	18.4
MILAN	9.4	2.8	4.6	2	2.2	0.4	0.6	4.8	2	0.8	1.2
GRAND RIVER	2.8	15.2	7	3.6	2.2	10.2	9.2	33.2	16.4	8.8	10.4
CAMP BELDEN	45.4		48	16	8	11	42	44.2	33.8	2	0.4
BERLIN LAKE	2.2	2.0	0.8	1.4	4	1.2	1	4.2	1.6	0.2	0.8
KILLDEER PLAINS	59.4	59.0	35.8	36.2	20	55.6	40.4	21.4	42	34.6	41
KILLBUCK MARSH	22.6		18	8.8	12.6	17.2	5.2	16.4	13.2	12.8	
HIGHLANDTOWN	43.6	5.6	11.6	11.6	22.4	17.6	15.6	13.6	86	40	7.32
BIG ISLAND	49.2	68.0	23	49.4	16.8	45.6	44.8	27.2	25.8	18	36
BEACH CITY	0.6	0.2	0.4	2.8	2.4		14	53	16	38	30
BRUSH CREEK	38.8	8.0	17.8	24.2	32.4	29	11.6	1.6	40.8	20.8	12.8
KOKOSING	2.0	0.0	4.4	4.8	1.2	2.4	3.4	46.2	2.2	51.4	6
DELAWARE	6.8	10.0	25.8	13.2	11.8	12.2	8.2	24.2	17.6	15	13.8
WOODBURY	43.4	1.6	2.12	0.72	25	13.8	13	8.4	43.4	24.8	11.2
EGYPT VALLEY	28.4	6.8	20.8	5.2	13	22.4	11.8	10.6	26.6	12.6	12.6
SALT FORK	64.8	5.6	24.2	15	2.4	56	12.4	20.6	19.2	21	10.8
MONROE LAKE	65.4	6.6	6.6	3.6	16	32	7.6	17.4	28.2	13	9.2
WOODLAND TRAILS	6.0	2.4	20.2	12.6	0	6	10	8	10.4	8	5.4
ALES RUN	39.6	16.2	39	13.8	20.6	15.8	23	47.4	69.4	26	1.2
DEER CREEK	0.4	0.0	2	0	2.2	0.6	0.8	0.4	0.4	0	0.4
WOLF CREEK	18.6	5.4	39	9	8.4	21.2	23.8	29.8	42.2	31.2	6
TRIMBLE	24.4	5.8	44.6	3.6	7.8	35	30	39.6	60	41.8	3.6
PLEASANT VALLEY	2.4	0.0	6.2	0	0.6	1	0.2	1	1.6	2	4
ROSS LAKE	30.8	18.0	35.8	2	37	27.4	14.8	23	55	6.2	
WATERLOO	40.0	4.0	41.6	10	6.4	12.4	12.6	35	51.6	25	2.8
ACADIA CLIFFS	42.6	0.8	37.6	4.6	14.8	11.4	8.8	53.4	52.4	27	8.4
FALLSVILLE	3.2	36.0	3.2	15.6	8.8	20.6	11.6	53.8	25.32	0.8	40.8
FOX LAKE	29.8	4.6	32.64	6	2.6	32.8	2.2	41.8	39.2	4	1
WELLSTON	42.2	7.0	39.8	3.8	28.2	27.2	10.6	48.6	38.4	11.6	15.8
EAST FORK	9.8	6.6	40.4	1.2	32.8	0.48	7.2	22.8	31	2.4	1.2
TRANQUILITY	16.2	9.2	7.2	3.6	2.8	36.6	10.4	36.6	33.8	4.4	7.2
COOPER HOLLOW	57.6	17.6	73.4	0	23.2	61.2	30.8	59.8	68	25.4	11
TYCOON LAKE	50.8	18.8	61.4	0	6	41.8	13.4	58	66	10.8	5.6
CROWN CITY	38.0	11.4	58.4	0.6	23.4	57.4	21.8	72.4	70.6	17.2	18.8
MEAN	26.5	10.4	24.6	9.6	12.1	21.4	14.7	27.1	31.9	17.9	10.6
STDEV	20.3	15.0	19.1	11.0	10.3	17.6	11.3	19.7	22.4	13.8	10.8



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Stdev: Standard Deviation

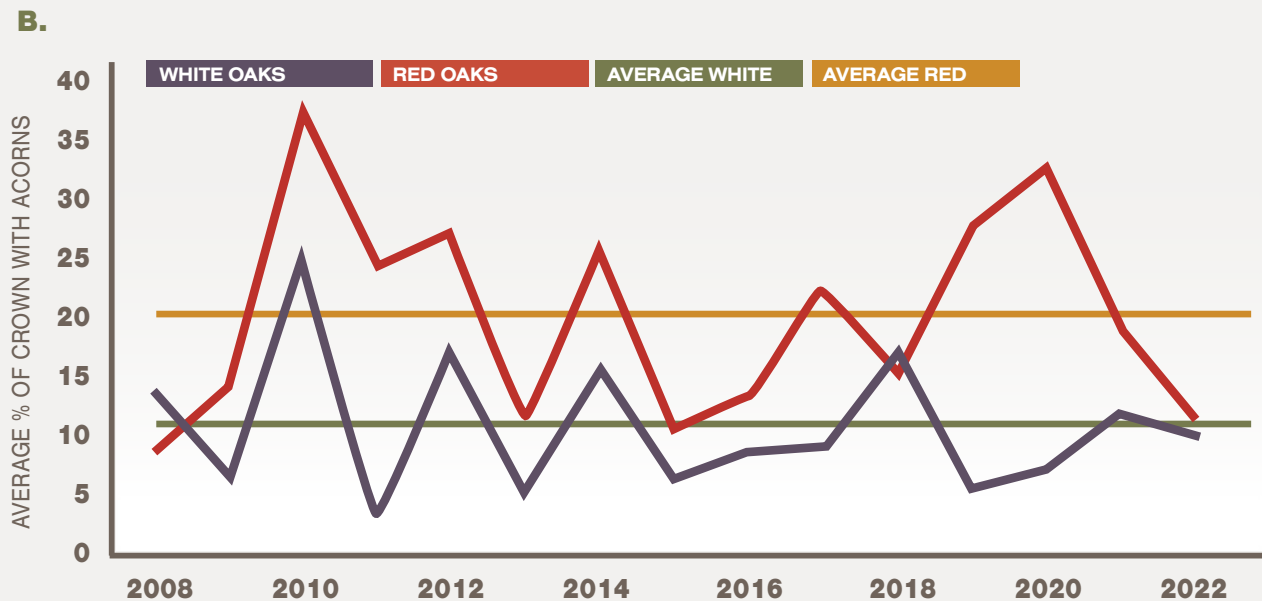
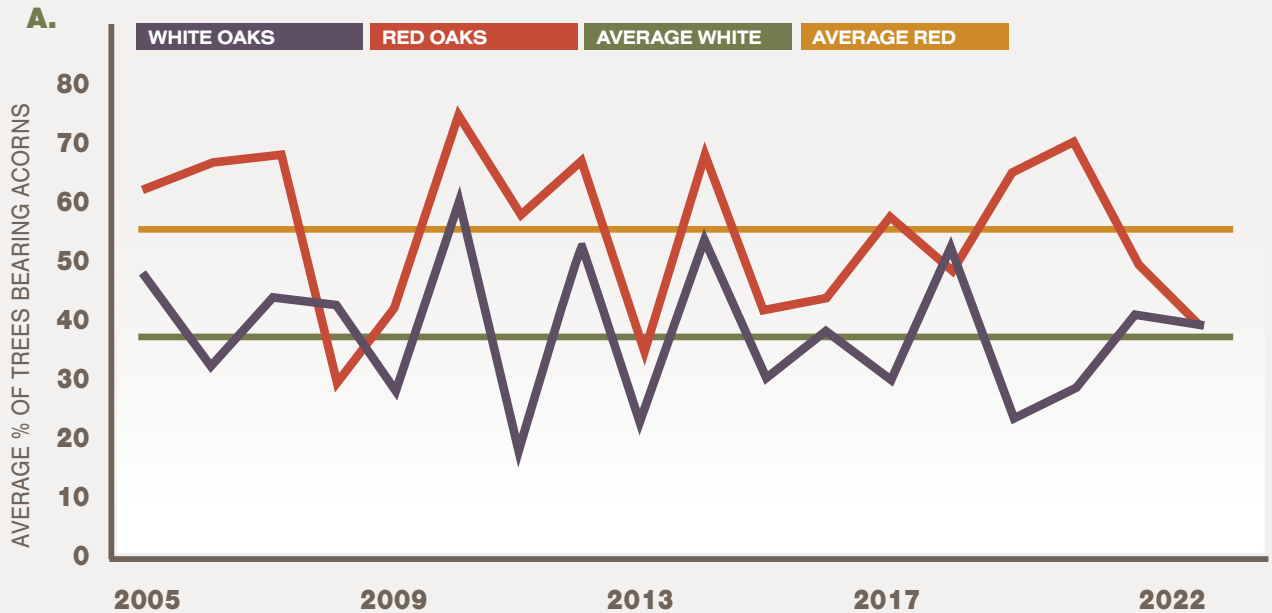
# 18TH ANNUAL OHIO

# MAST

# SURVEY RESULTS



**FIGURE 1.**  
AVERAGE PERCENTAGE  
OF OAK TREES BEARING  
ACORNS, 2005 TO  
PRESENT (A) AND  
AVERAGE PERCENTAGE  
OF CROWN WITH  
ACORNS, 2012 TO  
PRESENT (B) BASED ON  
MAST SURVEYS FROM  
38 WILDLIFE AREAS.



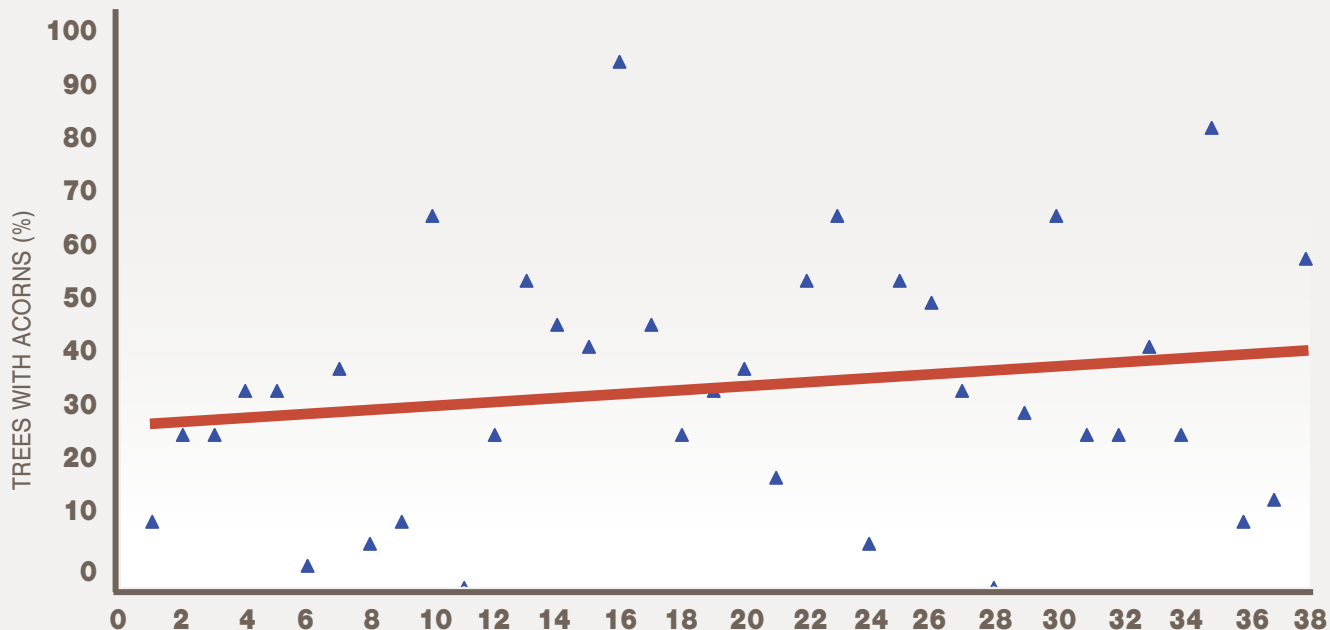


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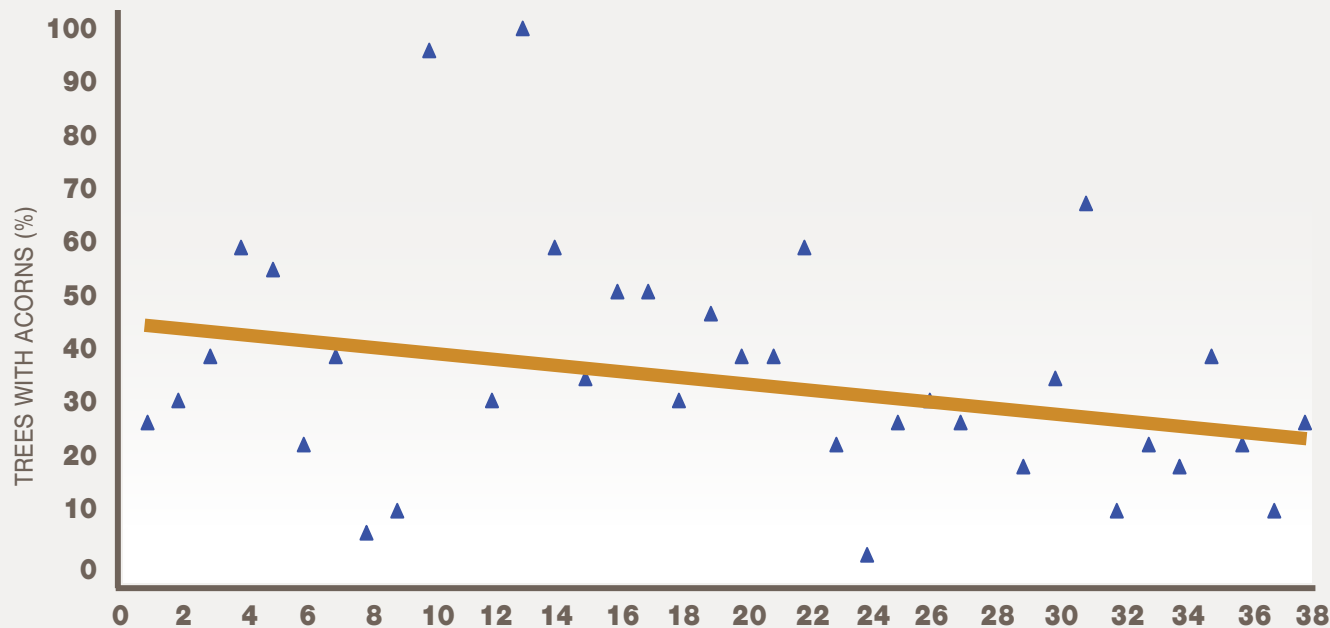


**FIGURE 2.**  
PERCENTAGE OF WHITE  
(A) AND RED OAK (B)  
TREES WITH ACORNS  
ON THE 2022 MAST  
SURVEY BY WILDLIFE  
AREA, RANKED NORTH  
TO SOUTH. TREND LINES  
REPRESENT LATITUDINAL  
GRADIENT.

## A. WILDLIFE AREAS RANKED NORTH TO SOUTH (WHITE OAK)



## B. WILDLIFE AREAS RANKED NORTH TO SOUTH (RED OAK)



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