

Turfgrass Maintenance Predicting the Probability of a Freeze

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Freeze probabilities have been developed based on weather data recorded at 43 sites across Tennessee from 1921 through 1950. Air temperature at each location was measured by thermometer about 4½ feet above ground in a weather instrument shelter. This information may be particularly helpful as turfgrass managers schedule fertilizer and pesticide applications in spring and fall.

Using the freeze probability information. Probabilities are intended to describe average conditions across the state. The listed probability of a spring freeze (32 degrees Fahrenheit)

occurring at Bristol on or after April 2 is 90 percent (e.g., the odds of a spring freeze on or after April 2 are 9 to 1). Similarly, the listed probability of a fall freeze (32 degrees Fahrenheit) occurring in Dickson on or before October 23 is 50 percent (e.g., the odds of a fall freeze on or before October 23 are 1-to-1).



Frost Pattern on Common Bermudagrass

The probability of freezing temperatures (32 degrees Fahrenheit) on or after indicated dates. ^a

Station	Probability (%) - Spring				
	90	75	50	25	10
Ashwood	Mar. 26	Apr. 1	Apr. 8	Apr. 15	Apr. 21
Bolivar	Mar. 12	Mar. 22	Apr. 3	Apr. 15	Apr. 25
Bristol	Apr. 2	Apr. 8	Apr. 16	Apr. 24	May 1
Brownsville	Mar. 11	Mar. 19	Mar. 28	Apr. 5	Apr. 13
Carthage	Mar. 20	Mar. 29	Apr. 7	Apr. 16	Apr. 25
Chattanooga Airport	Mar. 9	Mar. 17	Mar. 26	Apr. 4	Apr. 12

Station	Probability (%) - Spring				
	90	75	50	25	10
Clarksville	Mar. 19	Mar. 27	Apr. 4	Apr. 12	Apr. 20
Coldwater	Mar. 27	Apr. 3	Apr. 11	Apr. 19	Apr. 26
Copperhill	Mar. 28	Apr. 4	Apr. 11	Apr. 18	Apr. 24
Covington	Mar. 10	Mar. 18	Mar. 27	Apr. 4	Apr. 12
Crossville	Apr. 5	Apr. 13	Apr. 21	Apr. 29	May 7
Dale Hollow Dam	Mar. 31	Apr. 6	Apr. 13	Apr. 20	Apr. 26
Decatur	Mar. 31	Apr. 6	Apr. 14	Apr. 22	Apr. 30
Dickson	Mar. 25	Apr. 1	Apr. 10	Apr. 18	Apr. 26
Dover	Mar. 29	Apr. 6	Apr. 15	Apr. 24	May 2
Franklin	Mar. 27	Apr. 4	Apr. 12	Apr. 20	Apr. 28
Gatlinburg	Apr. 14	Apr. 21	Apr. 29	May 7	May 14
Greeneville Exp. Sta.	Apr. 5	Apr. 12	Apr. 20	Apr. 28	May 5
Jackson Exp. Sta.	Mar. 22	Mar. 29	Apr. 6	Apr. 14	Apr. 21
Kenton	Mar. 15	Mar. 23	Apr. 1	Apr. 10	Apr. 18
Knoxville Airport	Mar. 14	Mar. 22	Mar. 31	Apr. 9	Apr. 17
Lewisburg	Mar. 31	Apr. 6	Apr. 14	Apr. 22	Apr. 29
Loudon	Mar. 21	Mar. 31	Apr. 10	Apr. 20	Apr. 30
Lynnville	Mar. 26	Apr. 3	Apr. 13	Apr. 23	May 1
McMinnville	Mar. 21	Mar. 29	Apr. 8	Apr. 18	Apr. 26

Station	Probability (%) - Spring				
	90	75	50	25	10
Memphis Airport	Mar. 1	Mar. 10	Mar. 20	Mar. 30	Apr. 8
Milan	Mar. 16	Mar. 25	Apr. 4	Apr. 14	Apr. 23
Moscow	Mar. 18	Mar. 25	Apr. 2	Apr. 10	Apr. 17
Murfreesboro	Mar. 20	Mar. 28	Apr. 5	Apr. 13	Apr. 21
Nashville Airport	Mar. 12	Mar. 19	Mar. 28	Apr. 6	Apr. 13
Newbern	Mar. 11	Mar. 18	Mar. 27	Apr. 5	Apr. 12
Newport	Mar. 28	Apr. 4	Apr. 11	Apr. 18	Apr. 25
Norris Dam	Apr. 3	Apr. 9	Apr. 16	Apr. 23	Apr. 29
Palmetto	Mar. 27	Apr. 3	Apr. 10	Apr. 17	Apr. 24
Paris	Mar. 27	Apr. 3	Apr. 12	Apr. 21	Apr. 28
Rogersville	Apr. 4	Apr. 10	Apr. 17	Apr. 24	Apr. 30
Rugby	Apr. 17	Apr. 24	May 3	May 12	May 20
Samburg Wildlife Rfg.	Mar. 11	Mar. 20	Mar. 29	Apr. 7	Apr. 16
Savannah	Mar. 17	Mar. 26	Apr. 4	Apr. 13	Apr. 22
Springfield Exp. Sta.	Mar. 24	Mar. 31	Apr. 7	Apr. 14	Apr. 21
Tulahoma	Mar. 26	Apr. 2	Apr. 10	Apr. 18	Apr. 25
Union City	Mar. 15	Mar. 22	Mar. 31	Apr. 9	Apr. 16
Waynesboro	Apr. 1	Apr. 9	Apr. 18	Apr. 27	May 5

The probability of freezing temperatures (32 degrees Fahrenheit) on or before indicated dates.^a

Station	Probability (%) - Fall				
	10	25	50	75	90
Ashwood	Oct. 9	Oct. 16	Oct. 24	Nov. 1	Nov. 8
Bolivar	Oct. 6	Oct. 14	Oct. 23	Nov. 1	Nov. 9
Bristol	Oct. 8	Oct. 15	Oct. 23	Oct. 31	Nov. 7
Brownsville	Oct. 18	Oct. 24	Oct. 31	Nov. 7	Nov. 13
Carthage	Oct. 13	Oct. 20	Oct. 28	Nov. 5	Nov. 12
Chattanooga Airport	Oct. 27	Nov. 2	Nov. 9	Nov. 17	Nov. 25
Clarksville	Oct. 17	Oct. 23	Oct. 29	Nov. 4	Nov. 9
Coldwater	Oct. 6	Oct. 13	Oct. 21	Oct. 29	Nov. 6
Copperhill	Oct. 9	Oct. 16	Oct. 23	Oct. 30	Nov. 6
Covington	Oct. 23	Oct. 28	Nov. 3	Nov. 9	Nov. 14
Crossville	Sept. 26	Oct. 4	Oct. 14	Oct. 24	Nov. 1
Dale Hollow Dam	Oct. 4	Oct. 12	Oct. 21	Oct. 30	Nov. 7
Decatur	Oct. 11	Oct. 17	Oct. 24	Oct. 31	Nov. 6
Dickson	Oct. 8	Oct. 15	Oct. 23	Oct. 31	Nov. 7
Dover	Oct. 4	Oct. 11	Oct. 19	Oct. 27	Nov. 3
Franklin	Oct. 5	Oct. 13	Oct. 21	Oct. 29	Nov. 6
Gatlinburg	Oct. 1	Oct. 8	Oct. 16	Oct. 24	Oct. 31
Greeneville Exp. Sta.	Oct. 1	Oct. 8	Oct. 17	Oct. 26	Nov. 2
Jackson Exp. Sta.	Oct. 9	Oct. 16	Oct. 23	Oct. 30	Nov. 6

Station	Probability (%) - Spring				
	90	75	50	25	10
Kenton	Oct. 8	Oct. 16	Oct. 24	Nov. 1	Nov. 9
Knoxville Airport	Oct. 24	Oct. 30	Nov. 6	Nov. 13	Nov. 19
Lewisburg	Oct. 4	Oct. 12	Oct. 20	Oct. 28	Nov. 5
Loudon	Oct. 8	Oct. 16	Oct. 24	Nov. 1	Nov. 9
Lynnville	Oct. 5	Oct. 12	Oct. 20	Oct. 28	Nov. 4
McMinnville	Oct. 12	Oct. 20	Oct. 28	Nov. 5	Nov. 13
Memphis Airport	Oct. 26	Nov. 3	Nov. 12	Nov. 21	Nov. 29
Milan	Oct. 11	Oct. 18	Oct. 26	Nov. 3	Nov. 10
Moscow	Oct. 8	Oct. 16	Oct. 24	Nov. 1	Nov. 9
Murfreesboro	Oct. 10	Oct. 17	Oct. 25	Nov. 2	Nov. 9
Nashville Airport	Oct. 27	Nov. 1	Nov. 7	Nov. 13	Nov. 18
Newbern	Oct. 15	Oct. 22	Oct. 31	Nov. 9	Nov. 16
Newport	Oct. 9	Oct. 16	Oct. 24	Nov. 1	Nov. 8
Norris Dam	Oct. 12	Oct. 19	Oct. 27	Nov. 4	Nov. 11
Palmetto	Oct. 6	Oct. 14	Oct. 24	Nov. 3	Nov. 11
Paris	Oct. 19	Oct. 25	Oct. 31	Nov. 6	Nov. 12
Rogersville	Oct. 8	Oct. 16	Oct. 24	Nov. 1	Nov. 9
Rugby	Sept. 26	Oct. 2	Oct. 8	Oct. 14	Oct. 20
Samburg Wildlife Rfg.	Oct. 20	Oct. 26	Nov. 2	Nov. 9	Nov. 15

Station	Probability (%) - Spring				
	90	75	50	25	10
Savannah	Oct. 11	Oct. 19	Oct. 28	Nov. 6	Nov. 14
Springfield Exp. Sta.	Oct. 18	Oct. 24	Oct. 30	Nov. 5	Nov. 11
Tullahoma	Oct. 10	Oct. 16	Oct. 23	Oct. 30	Nov. 5
Union City	Oct. 16	Oct. 22	Oct. 28	Nov. 3	Nov. 9
Waynesboro	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct. 29

^a From: Pickett, B. S. and M. H. Bailey. 1964. Freeze probabilities in Tennessee. University of Tennessee Agric. Exp. Sta. and Weather Bureau, U. S. Dept. of Commerce cooperating, Bull. 374.

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