

The “mytree” web-based tool for estimating tree value

<https://www.itreetools.org/mytree/>

About the tool (from the website):

Offering more than just beauty and shade, trees provide tangible benefits, such as removal of atmospheric carbon dioxide and pollution, stormwater reduction, temperature modification, and more.

By removing carbon dioxide, trees help mitigate climate change. The shade provided by urban tree canopies can also help minimize the urban heat island effect. In addition, trees intercept stormwater, which can reduce flooding and improve water quality, and reduce air pollution, such as ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and fine particulate matter. Reduction of air pollution has proven benefits to human health - trees truly can enhance our lives! i-Tree MyTree allows you to explore the individual benefits provided by the trees near you. This tool was developed by the US Department of Agriculture Forest Service, the Arbor Day Foundation, and other partners. It is available for use without cost. It is part of the comprehensive iTree suite of tools for forest assessment: www.itreetools.org

Equipment needed:

Camera to take photos of the tree. Diameter tape to measure size of tree. (If forester’s diameter tape isn’t available, you can record the circumference using an ordinary tape measure.) If the tree is near a building, you will need a tape measure to find the distance from building and a compass (or map) to determine the direction from the tree to the building.

Information you will need to collect:

Location of the tree
Species of tree
Tree condition
Trunk size
Sun exposure

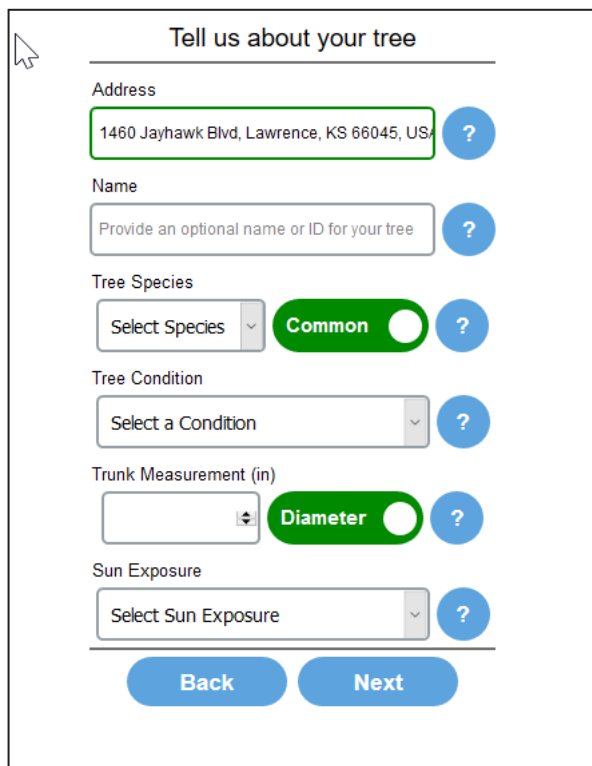
Initial screen when you open the MyTree webpage. In addition to location, you will need to decide whether you will be recording measurements in metric or English units

The address that you enter tells MyTree where your tree is located. This helps localize your results. Addresses can be entered manually or using the geolocation function on your mobile device. If you are not satisfied with the address that appears here, click the Back button and enter a different address.

Identify the tree

Take photos of the tree, including close up photos of leaves, branches, and seeds (or fruits or pine cones) to help identify the tree. When you have the identification, select the species name of the tree that you would like to assess. (Use the toggle to view species by common or scientific name.) • Choose a species from the drop-down list. (Note: Species common names are listed as “Maple, Red”)

Optionally, you can also give your tree an informal “name.” This can be helpful if you will be including more than one tree to measure and assess.



The MyTree data entry page, after you have entered the location

Tree Condition:

Select the condition that best describes your tree by choosing a class from the drop-down list.

Here's a tip: Tree condition can be identified by looking at the leaves of your tree's crown – are portions of the crown missing leaves? Take photos of the whole tree from at least 2 directions to document its condition.

The following tree condition classes are available to choose from:

- Excellent – Tree has less than 1% of its leaves missing.
- Good – Tree is missing 1-10% of its leaves.
- Fair – Tree is missing 11-25% of its leaves.
- Poor – Tree is missing 26-50% of its leaves.
- Critical – Tree is missing 51-75% of its leaves.
- Dead – Tree is missing all of its leaves.



Poor condition; much of the canopy is missing



Good condition



Excellent condition

Trunk Measurement

Trunk measurement is the size of your tree's trunk measured at 4.5 feet (1.5 meters) above the ground in inches (in) or centimeters (cm), depending on which units you have selected.

"Diameter at breast height" (dbh) is the standard measurement of tree trunk size and is taken at 4.5 feet (1.5 meters) above the ground. Trunk measurement also can be entered as circumference size if you don't have a diameter tape measure.



Measure dbh at 4.5 ft above the ground



Carefully wrap the diameter tape around the tree trunk



Diameter tape has different scales on each side: Be sure to check the label! This side "dia. inches to 100ths" gives the diameter as inches with decimal fractions. In this case 24.6 inches

Sun Exposure

Sun exposure is the amount of sun that reaches the leaves of the tree based on its surroundings (i.e., the presence of additional structures or trees that may shade the tree). Select the sun exposure that best describes your tree by choosing from the drop-down list: **Full sun** **Partial sun** **Full shade**

MyTree tool with info from the common persimmon tree located in front of Strong Hall on the KU campus

Tell us about your tree

Address

1460 Jayhawk Blvd, Lawrence, KS 66045, USA

?

Name

Strong Hall persimmon

?

Tree Species

Persimmon, Cor

Common

?

Tree Condition

Good

?

Trunk Measurement (in)

24.6

Diameter

?

Sun Exposure

Full Sun

?

BackNext



The other side of the tape is marked with inches. This is the circumference: $77 \frac{9}{16}$ (or 77.7 inches = $24.6 \times \pi$)

Nearby Building:

Trees that are located near (within 60 feet [=18.3 meters]) to buildings can affect the amount of energy used to heat or cool that building by modifying climate, producing shade, and reducing wind speeds. If your tree is within this distance of a building, you will need to record additional information about the age of the building, the distance, and the direction from the tree. If you check the box for a nearby building, these additional choices will be available.

Question choices

When was building built?

- before 1950
- between 1950 and 1980
- after 1980

(in general, older buildings have less insulation, so shading by a tree will have a larger effect)

How far is the tree from the building?

- 0-20 ft
- 20-39 ft
- 39-59 ft
- more than 59 ft

Estimate compass direction *from the tree to the building*

- N (0°)
- NE (45°)
- E (90°)
- SE (135°)
- S (180°)
- SW (225°)
- W (270°)
- NW (315°)

The screenshot shows a web form titled "Tell Us About Your Tree". It contains four questions, each with a dropdown menu and a blue circular button with a question mark. The first question is "Is there a building nearby?" with a green checkmark icon. The second question is "When was the building built?" with a dropdown menu labeled "Select Building Vintage". The third question is "How far is the tree from the building?" with a dropdown menu labeled "Select a Distance". The fourth question is "Estimate the compass direction from the tree to the building." with a dropdown menu labeled "Select a Direction". At the bottom of the form are two blue buttons labeled "Back" and "Finish".

Final Step and Results:

After you have entered the information about one tree, you have the option to add information about additional trees in the same location. When you are done, you can have the results calculated for individual trees or for all the trees together.

More Info

About

Click or tap Calculate All or Calc to see your tree benefits.

Add Tree

Calculate All

Strong Hall persimmon
Persimmon, Common

Calc

Clear All


Start Over

Feedback

The output page:

MyTree Benefits

Serving size: 1 tree



Carbon Dioxide (CO₂) Sequestered	\$0.65
CO ₂ absorbed each year	65.32 lbs
Storm Water	\$27.41
Rainfall intercepted each year	4421 gal.
Air Pollution removed each year	\$1.98
Ozone	11.36 oz
Nitrogen dioxide	2.33 oz
Sulfur dioxide	1.80 oz
Large particulate matter**	4.89 oz
Energy Usage each year[*]	\$0.00
Electricity savings (A/C)	0.00 kWh
Fuel savings (NG, Oil)	0.00 therms
Avoided Emissions	
Carbon dioxide	0.00 lbs
Nitrogen dioxide	0.00 oz
Sulfur dioxide	0.00 oz
Large particulate matter**	0.00 oz

Benefit are estimated based on USDA Forest Service research and are meant for guidance only: www.itreetools.org

^{*}Positive energy values indicate savings or reduced emissions. Negative energy values indicate increased usage or emissions.

^{**}is not greater than 10 microns

Interpreting your results. The www.itreetools.org website has extensive documentation about the way these benefits are estimated and how trees provide them. This app is a considerably simplified version of more specialized tools and models developed by the i-Tree consortium. Those are intended for use by professional landscape architects, urban planners, and foresters.