

# BG-Map

*Mapping the world... one plant at a time*

## Garden Notepad Plus Users Manual



Garden Notepad Plus version 5.0  
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## What is Garden Notepad Plus?

GN+ is a time and labor saving software application that allows garden staff to capture information about the size and condition of plants in the field on an iPad and automatically upload and transfer that information to *BG-BASE*. To use GN+, you must first install, Web-VQF, the BG-Map web interface.

## What Data Can You Record With Garden Notepad Plus?

GN+ allows you to record:

- ❖ Condition
- ❖ Images
- ❖ DBH
- ❖ Number of Trunks
- ❖ Sex
- ❖ Reproductive Status
- ❖ Vegetative Status
- ❖ Pests and Diseases
- ❖ Container
- ❖ Die Why
- ❖ Location
- ❖ Number of Plants
- ❖ Special Characteristics
- ❖ Spread
- ❖ Height
- ❖ Check Note
- ❖ Performance Note
- ❖ Labels Existing
- ❖ Labels Needed
- ❖ Tree Hazard Score, Comments and Recommended Action
- ❖ Up to 6 Images per Plant
- ❖ Horticultural Tasks Completed
- ❖ iTree Data

## Starting Garden Notepad Plus

Tap the GN+ icon on the iPad home screen.

## About Garden Notepad Plus Inventories

To use GN+, you need to create at least one inventory list. This can be a list of living plants in a *BG-BASE* Location or a Location Group, a *BG-BASE* saved list and/or a BG-Map Defined View. To create an inventory list, in BG-Map go to **Field Data/Create Garden Notepad Plus Inventories**, and follow the directions in the help screen. The list of plants in each inventory is automatically updated daily, so the inventory lists available for download by GN+ are always current.

Once you select an inventory list in the GN+ home screen, you cannot select another inventory list until the recorded data has either been uploaded or cleared. When using GN+, you can record data for other plants not on the selected inventory list by entering their accession numbers or other unique codes of your own choosing. And,

you do not have to record data for all the plants on the inventory list before uploading the recorded data.

## Exporting Other Data to Garden Notepad Plus

Before using GN+, you must also export data from several files, including codes for Containers, Die Why, Labels, Locations, Special Characteristics, Pests and Diseases and Staff. To do this, in BG-Map go to **Field Data/Export BG-BASE Label Types, Container and Die Why Codes**. You will also need to export Check Note phrases – for details, in BG-Map go to **Field Data/Edit Garden Notepad Checknote Phrases**, and follow the instructions in the help screen.

## The Garden Notepad Plus Home Screen

iPad 9:59 AM 100%

# BG-Map Garden Notepad Plus

Download ↓ Upload ↑

**GN+**

**Enter Data**

**User Name**  
Enter Your BG-BASE Initials

**Hort. Management Contact**  
Enter Your Hort. Management Contact Code (optional)

**0 Records Have Been Recorded**

**Inventory: TOMIPlants in Location B18**  
Select an Inventory

TOMIPlants in Location B18

**Camera Image Resolution**

Normal

High

Garden Notepad Plus  
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BG-Map  
Mapping the world... one plant at a time

### Downloading the Latest Inventory Lists and Other Data

Before selecting a new inventory, tap **Download** to obtain the most recent inventory lists and other data. (**Internet Connection Required**) Restart GN+ when prompted.

### Selecting an Inventory

Tap the down arrow, and select an inventory from the choices listed.

### Selecting a Camera Image Resolution

Select either normal or high image resolution. This will change the size of the images recorded from the normal 960 x 720 to 1920 x 1440. Once you select a resolution, you cannot change it until you start a new inventory.

### Beginning to Inventory – Logging in and Entering Data

Enter your initials, which must exist in the BG-BASE Staff file.

If you intend to enter Horticultural Tasks Completed, enter your contact code, which must first be entered in the Contacts section of Horticultural Management in BG-Map – Tools/Horticultural Management/Horticultural Contacts.

Tap **Enter Data** to begin. This loads the inventory and takes you to the Inventory List Screen.

<b>Note:</b> <b>If the inventory list is quite long, it may take some time to load.</b>
---

### Clearing all Recorded Data

To clear all recorded data without uploading it, tap “Download”, and download new data (**Internet Connection Required**.)

### Uploading the Recorded Data

After you have recorded data for as many plants as you wish, you may upload it to the server by tapping **Upload** (**Internet Connection Required**.)

## **Editing the Uploaded Data and Transferring it to *BG-BASE***

The uploaded data is stored on the server in the folder **\bgmapwin\ECM\Web\GNP\GNP202\Field Data**. A new file in this folder is created each time data is uploaded. The file names consist of the initials entered plus numbers representing that date and time the data was uploaded.

### To Insert the Data *into BG-BASE* without Editing

In BG-Map, tap **Field Data/Upload**, and select the data file in the folder listed above.

### To Review and Edit the Data Before Inserting it into *BG-BASE*

In BG-Map, tap **Field Data/Edit/Print Garden Notepad Data**, and select the data file in the folder listed above. Edit the data as required, following the instructions in the help screen. Then, tap **Field Data/Upload**.

## Recording Images



Using Garden Notepad Plus, you can record up to 6 images of each plant. Images can be recorded only after you have saved the record for the plant. Then, tap “Add Images” in the Inventory List Screen.

### Taking Pictures and Adding Captions

Tap the camera icon, and choose “Take Photo.” Take the picture in the normal way and choose “Use.” The picture will be inserted into the first available empty space. You can then add an image description or leave it blank.

You may take additional pictures up to a maximum of 6. To delete an image, tap the corresponding “Delete” button.

### Taking Images With Portrait Orientation

When you upload the image into BG-Map you will be able to correct any rotation so that all images appear right side up.

### Uploading and Using the Images

When you upload the Garden Notepad Plus data, the images will be uploaded and stored in the `\bgmapwin\ECM\Web\GNP\GNP202\Field Data\Images` folder as JPEG images. The next time you choose "Upload" from the BG-Map field data menu, the images will be moved to the folder "GNP" in the web folder designated as "Plantpix." You will then be able to edit the images before they are automatically assigned in BG-Map to the corresponding Plants (not Names), where they will be available for viewing when a plant record is pulled up in BG-Map (but not in *BG-BASE*.) The images will also be viewable in Web-VQF at the Staff and Visitor Levels. To make these images only viewable at the Staff Level, uncheck the option "Display GNP Images at Staff Level Only" in the Web-VQF/ECM Settings Window/Admin Tab.



Acc. Num.	Name	Saved	Last Loc.	Qty.	Last Check	Co...	Repro. S...	Che
1985-024*C	Prunus laurocerasus 'S...		B18	1		A		
1985-024*D	Prunus laurocerasus 'S...		B18	1	28 FEB 1990	A		dee
1985-024*E	Prunus laurocerasus 'S...		B18	1	28 FEB 1990	A		dee
1985-024*F	Prunus laurocerasus 'S...		B18	1	28 FEB 1990	A		dee
1985-024*G	Prunus laurocerasus 'S...		B18	1		A		
2003-002*A	Prunus mume 'Hanaka...		H19	1	25 FEB 2014	A		Pru
1994-065*G	Prunus 'Okame'		H19	1	05 APR 2013	A		
2002-062*A	Pseudotaxus chienii		F18	1	27 MAR 20...	A		
2000-118*A	Pseudotsuga menziesii...		H19	1	01 MAY 20...	A		NEV
2002-212*A	Punica granatum		G18	1	25 FEB 2014	A		
2002-212*B	Punica granatum		G19	1	25 FEB 2014	A		
1953-492*A	Quercus acutissima		F18	1	29 FEB 2012	A		Che
1932-0166*A	Quercus alba		B18	1	19 MAY 20...	A		
1995-040*A	Quercus alba	✓	F17		04 MAY 20...	A		
1954-0837*A	Quercus bicolor		F19	1		A		On
2011-020*A	Quercus bicolor		F19	1	14 JAN 2014	A		
1996-416*E	Quercus glandulifera v...		H18	1	26 JAN 2009	E		
2005-134*A	Quercus liaotungensis		X33	1	31 MAR 20...	A		Grh
1988-109*A	Quercus macrocarpa		F18	1	28 NOV 20...	A		Pru
1996-330*A	Quercus macrocarpa		F18	1	14 FEB 2013	A		Pru

## The Inventory List Screen

### Previous Observations Shown on the List

Previous observations are shown in light green on the list. These are replaced by new data when you enter it.

### Selecting a Plant to Inventory

Touch any plant on the list to select it. Then touch **Edit Record** to open the plant in the Data Entry Screen – Page 1.

### Navigating the List

To scroll up or down the list, swipe the screen or use the scroll bar at the side of the list.

To move up or down the list several plants at a time, touch the **single arrow** buttons.

To move to the top or bottom of the list, touch the **double arrow** buttons.

To see other columns in the list, swipe from right to left.

To find a plant accession number or name in the list, touch a **Find** button, and all or enter part of the accession number or plant name.

#### Deleting Data for a Plant

As data for each plant is saved, check marks are added to the list. To delete all the data for any plant that has a check mark, select the plant, and touch **Clear Record**.

## Data Entry Screen – Page 1

This screen allows you to enter data on plant condition, phenology, pests and diseases plus a check note.

#### Condition

Select the *BG-BASE* condition code. The last previously recorded condition is displayed in the box below.

#### Reproductive Status

Select one or more *BG-BASE* phenology codes. Note, codes J (Juvenile) or V (Vegetative) cannot be combined with other codes. Double-tap the items to select them.

#### Pests and Diseases

The table lists items from the PESTS\_AND\_DISEASES table in BG-Map. Tap the “Yes” column to indicate that one or more pests or diseases have been observed. To edit the list of pests and diseases, in BG-Map, go to Tools/Horticultural Management/Pests and Diseases.

#### Check Note

You can type in your notes and/or select phrases to insert by picking them from the “Phrase Picker.” To insert a phrase, tap the “Phrase Picker” and select phrase from the dropdown list.

#### Opening the Record for This Plant in Web-VQF

Touch **Open in Web-VQF** to display the full record for this plant (**Internet Connection Required**)

**1995-040\*A Quercus alba Page 1**

Condition

Reproductive Status (Select one or more)

Condition entered into table

Reproductive Status entered into table

Check Note Phrase Picker ↓

needs pruning

Check Note

needs pruning

Pests and Diseases

Code	Name	Yes
BORER_1	Borer Number 1	
VIRUS_2	Virus Number 2	

Condition entered into table

Condition entered into table

Reproductive Status entered into table

Reproductive Status entered into table

iTree Eco   Hort. Mgt.   Page 1   Page 2 →   Page 3 →

Internet Connection Required

Open in Web-VQF   Cancel   Save

Navigating to Other Pages

- ❖ **iTree** – Goes to the iTree Data Entry Screen
- ❖ **Hort. Mgt.** – Goes to the Horticultural Management Tasks Page
- ❖ **Page 2** – Goes to Data Entry Screen Page 2.
- ❖ **Page 3** – Goes to Data Entry Screen Page 3.
- ❖ **Cancel** – Returns to the Inventory List Screen without saving.
- ❖ **Save** – Saves and returns to the Inventory List Screen

**Data Entry Screen – Page 2**

This screen allows you enter information for a number of different data fields.

Sex, Vegetative Status, Container, Number of Trunks

Select the appropriate codes from the dropdown lists.

**Note:** Before you enter the number of trunks for the first time, you must first set up BG-Map to assign a data field for this purpose. See "Quad Up Options" in the BG-Map Tools/Options menu.

1995-040\*A Quercus alba Page 2

Sex: [Dropdown]

Cause of Death: [Dropdown]

Container: [Dropdown]

Reason for Death: [Text Field: Enter text here]

New Location: [Dropdown]

On 04 MAY 2013, location was "F17"

Performance Note Phrase Picker: [Dropdown]

Number of Trunks: [Dropdown: 2]

Performance Note: [Text Field: Enter text here]

Vegetative Status: [Dropdown]

---

Spread in Feet: 21.4 Measurement Units:  English  Metric

DBH Ht. in Feet: 12345 Tree Height Calculator ↓

DBH in Inches: 4.1 3.8 Angle to Base: 123456

Height in Feet: 18 ← Calculate Height Angle to Top: 123456

Distance to Tree: 123456

iTree Eco Hort. Mgt. ← Page 1 Page 2 Page 3 →

Internet Connection Required

Open in Web-VQF Cancel Save

### Cause of Death

If the plant has died, select a cause of death. A popup message will appear that allows you to change the recorded condition to Dead or Removed. You can also enter additional notes in the space labeled Reason for Death.

### New Location

If the plant is in a new location that differs from the previous location shown in the box below, select the new location from the list. Then select a Location Change Type and a Number of Plants (or enter the word "MASS".)


### Spread, DBH and Height

Select a unit type (English or Metric), and enter only numeric values in these spaces. If you change the unit type after entering values, the values will be converted to the selected units.

If you selected a number of trunks greater than 1, for DBH, enter multiple values in the spaces provided. The number of values must match the number of trunks as entered, except, for number of trunks = ">6", enter 6 values.

You can record the height at which you measured the DBH. If you leave this blank, a standard height of 4.0 feet or 1.2 meters will be recorded.

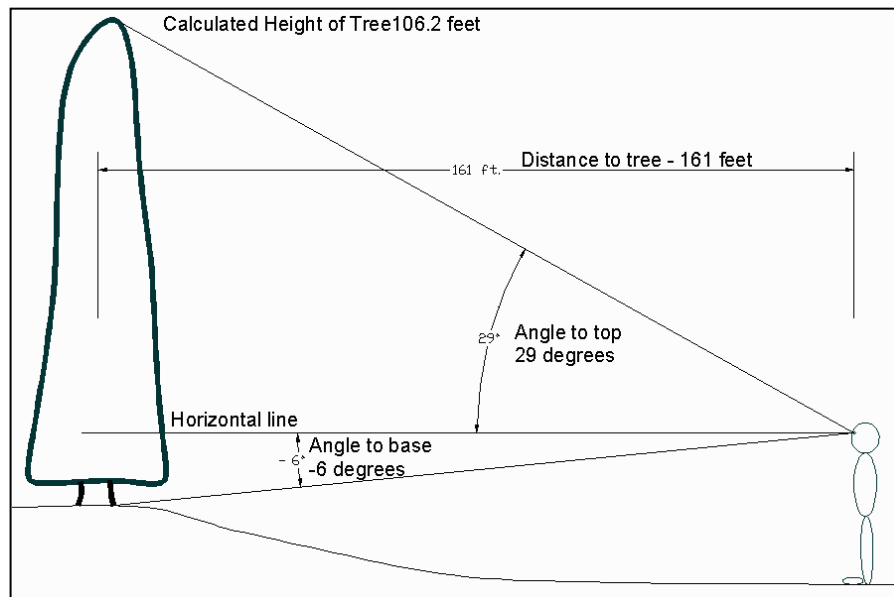
### Using Multiple Trunk Size Data

In BG-Map, you can view the multiple trunk sizes recorded for any tree by going to Tools/Horticultural Management/Enter Additional Plants Data. Or, click this icon: 

You can export multi-trunk sized in a report by adding the multi-trunk data fields to a Plant List Format in BG-Map

### Using the Tree Height Calculator

The height of a tree can be determined with the tree height calculator. To calculate the height, you must enter the angle to the base of the tree, angle to the top of the tree, and distance from the tree. These measurements are explained in the illustration.



In order to determine these three pieces of information, you will need to use a clinometer in conjunction with an electronic range finder or tape measure. The clinometer can determine the angles, the electronic range finder or tape measure can determine the distance.

Enter the angle to the base of the tree in the box labeled "angle to base". (If it is a downward angle, make sure it is negative.)

Enter the angle to the top of the in the box labeled "angle to top."

Enter the distance to the tree.

Touch **Calculate Height**. The tree's height will be calculated and automatically entered into the "Height" box.

#### Navigating to Other Pages

- ❖ **iTree** – Goes to the iTree Data Entry Screen
- ❖ **Page 1** – Goes to Data Entry Screen Page 1.
- ❖ **Page 3** – Goes to Data Entry Screen Page 3.
- ❖ **Cancel** – Returns to the Inventory List Screen without saving.
- ❖ **Save** – Saves and returns to the Inventory List Screen

## **Data Entry Screen – Page 3**

This screen allows you to enter data on labels, special characteristics and tree hazard rating.

#### Recording the Labels that the Plant Has

In the column labeled "Have", touch the boxes corresponding to each type of label currently on the plant.

#### Recording the Labels that the Plant Needs

In the column labeled "Need", touch the boxes corresponding to each type of label that the plant needs. When prompted, enter the quantity of labels needed and touch **OK**. If you wish to enter a note regarding the needed labels, touch the box labeled "Note", enter the note and touch **OK**.

#### Recording Special Characteristics

In the column labeled "Yes", touch the boxes corresponding to the Special Characteristics that pertain to this plant. If you wish to enter a note regarding a Special Characteristic, touch the box labeled "Note", enter the note and touch **OK**.

## **Tree Hazard Rating**

#### Numerical Ratings

All three of these ratings must be entered in order to produce an Overall Rating.

- ❖ **Probability of Failure** (1 to 4) – indicates the likelihood of failure of all or

- a portion of the tree.
- ❖ **Probability of Hitting Target** (1 to 4) – indicates the likelihood of the tree or a failed part striking a target, such as a person, vehicle or structure.
- ❖ **Consequences of Hitting Target** (1 to 4) – indicates the expected consequences of the tree or a failed part hitting the target.

Overall Rating

This determined by 3 items described above. It is based on the tables in ISA Publication Tree Risk Assessment, Best Management Practices, companion publication to ANSI A300 Part 9.

iPad
10:12 AM
100%

### 1995-040\*A Quercus alba Page 3

Labels		Have	Need	Note
D	Donor (gold) embossed label			
DA	Datacard format			
DE	dedication label			
EM	embossed	√		

Special Characteristics		Yes	Note
FA	fragrance		
FC	fall color	√	
FD	food		
FG	forage		

**Tree Hazard Rating** Note: this section should be completed only by a certified arborist qualified in tree risk assesment.

Recommended Action Phrase Picker ↓

Probability of Failure	2 possible ↓	needs pruning ↓
Probability of Hitting Target	3 medium ↓	Recommended Action needs pruning
Consequences of Hitting Target	3 signific... ↓	
Overall Rating	1 low	

Additional Note Phrase Picker → Additional Note

↓

Enter text here

iTree Eco
Hort. Mgt.
← Page 1
← Page 2
Page 3

Internet Connection Required

Open in Web-VQF
Cancel
Save

**Note:** **This rating should serve as a guide only.**  
 Accurate determination of hazard should be based on the full evaluation of the tree and its surroundings by a certified arborist qualified in tree risk assessment.

Action to be Taken

Enter text and/or choose a phrase from the Phrase Picker.

Notes

Enter text describing defects and other factors related to the recommended action and/or choose a phrase from the Phrase Picker.

**1995-040\*A Quercus alba**

**Horticultural Tasks - Check Those Completed**

Code	Description	Done	Note
REMOVAL	Plant Removal		
ANNUAL_PRUNI	Prune it	✓	
SPRAY_XYZ	Spray some stuff	✓	Note on some stuff



## Horticultural Management Tasks Completed

The table lists all Horticultural Management tasks. Tap the “Yes” column to indicate one or more tasks have been completed. To edit the list of tasks, in BG-Map, go to Tools/Horticultural Management/Horticultural Tasks. When the data is uploaded and converted, tasks will be marked as “Completed” in the BG-Map Horticultural Management Module, and any associated Work Orders will be marked as completed.

## iTree Data

1995-040\*A Quercus alba

iTree Eco Data

Height to Top of Crown	23
Height to Base of Crown	9
Crown Width (North-South)	21
Crown Width (East-West)	25
Percent of Crown Silhouette Missing	8
Percent of Crown Dieback	13
Crown Light Exposure	2
Land Use	I-Institutional
Tree Site	<input checked="" type="radio"/> Street Tree <input type="radio"/> Not Street Tree

Cancel   Clear iTree Eco Data   Save iTree Eco Data

### About iTree

iTree is a peer-reviewed software suite from the USDA Forest Service that provides urban forestry analysis and benefits assessment tools.

### Entering iTree Data

In any of the data entry screens, click “iTree” to access the iTree data entry screen. Fill in all the required data, and save. For details on the iTree data entry fields, refer to the iTree website: <https://www.itreetools.org/>

### Using iTree Data

In BG-Map, you can view the iTree data recorded for any tree by going to Tools/Horticultural Management/Enter Additional Plants Data. Or, click this icon:



You can export iTree data in a report by adding the iTree data fields to a Plant List Format in BG-Map

## **BG-Map**

*Mapping the world... one plant at a time*

C/o Morris Arboretum of the University of Pennsylvania  
100 E. Northwestern Ave.  
Philadelphia, PA 19118 • USA  
1.215.247.5777 ext. 283  
support@bg-map.com  
Users Support Website: [www.bg-map.com/userdata](http://www.bg-map.com/userdata)