



UNIVERSITY OF
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ENH143

EXTENSION

Institute of Food and Agricultural Sciences

Landscape Plant Propagation Information Retrieval System¹

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Introduction

A limiting factor to expansion of Florida's plant propagation industry is ready access to known propagation techniques for less common or difficult-to-propagate plants. Landscape Plant Propagation Information (LPPI) is an interactive computer application developed for retrieval of propagation information on several hundred landscape plants. LPPI has been written in S1032, a database manager that can be accessed through the Institute of Food and Agricultural Science (IFAS) Computer Network. The user can list plants in the database and retrieve information on individual plants by entering all or part of the scientific or common name.

Propagation information has been collected from scientific publications, plant propagation publications and communication with experienced nursery operators. A sample data collection form is in the Appendix. The database contains general descriptive information on each plant, the primary and secondary means of propagating the plant and important techniques to consider in each suggested propagation method. Possible propagation methods include cuttings, seed, layering, grafting and budding, and division. The information on each plant may not be

complete but reflects information collected to date. The database will be continually updated as additional information is obtained.

LPPI can be accessed from the Ornamental Horticulture Sub-Menu of the IFAS-VAX MENU. The program has been written to take advantage of the features of a DEC VT-100 terminal and if accessed by another terminal the presentation may be incorrectly formatted. A brief abstract is presented each time a user calls the program and the program is menu-driven.

The user may retrieve information by specifying the scientific name of a plant if the correct spelling is known. Otherwise, the user may elect to search for a plant in the database by entering a portion of the scientific or common name. A list of plant names with the sequence of letters entered will be displayed and the user may then enter the complete scientific name of the desired plant to obtain available propagation information.

AN EXAMPLE RUN

The user must first logon the IFAS Computer Network. Type "menu" at the \$ prompt and the submenu of available programs will be displayed.

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Select and enter the number associated with the Ornamental Horticulture Sub-Menu. The Ornamental Horticulture Sub-Menu will contain several programs pertaining to this subject matter. The user should enter the number corresponding to the LPPI program and press RETURN.

Once the user has accessed LPPI, a brief description of the program and a request for additional plant propagation information will be presented. The sharing of propagation information with the system will enable a more rapid expansion of the database and may result in the inclusion of information otherwise not available.

The user presses RETURN to begin the program. A menu is presented as follows:

- **Search for 1) scientific name; 2) common name; or 3)both; 4) retrieve information on a specific plant; 5)exit LPPI; 6) help.**
- Enter choice:

Options ", ", and " allow the user to search for a plant by entering only a portion of the scientific name, common name or either the scientific name or common name. Option " returns the user to the VAX system and " displays detailed instructions. If the complete scientific name of the plant in question is known, the user would enter " and press RETURN.

The following statement would be displayed.

- **Enter complete scientific name:**

In this example the user would enter *Ilex opaca* and press RETURN. The case of letters in the scientific name is not important in this program, but a cultivar name should be placed in single quotes. The user is given an opportunity to proof the name just entered when the question is presented.

- **Ilex opaca**
- **Is this correct? [(Y)es, (N)o, (Q)uit]**

The user would press "Y" and RETURN to indicate the spelling is correct. In all cases in this program when the user is given the option of selecting a yes or no, yes can be indicated by pressing RETURN.

After the user has indicated the spelling is correct the following information about *Ilex opaca* would be presented in sections.

- **Propagation Information for Ilex opaca**
- **Common Name: American Holly**
- **Plant type: evergreen medium tree**
- **Primary means of propagation: cutting**
- **Other means of propagation: seed, grafting/ budding**
- **Press RETURN for Cutting Information:**

The user would press RETURN and the cutting section of information would be presented and the previous information would scroll off the top of the screen.

- **Cutting information**
- **Cutting type(s): stem tip**
- **Cutting maturity: semi-hardwood**
- **Best time of the year to take the cutting: summer**
- **Hormone suggestion: IBA TALC 8000 PPM**
- **Rooting environment for cuttings: Intermittent mist**
- **The optimum rooting air temperature for the cuttings is 75-80 degrees F**
- **The optimum rooting soil temperature for the cuttings is 75-80 degrees F**
- **The cuttings require about 6-8 weeks to root**
- **Press RETURN for Seeding information:**

The user would press RETURN and the seeding section of information would be presented and the previous information would scroll off the top of the screen.

- **Seeding information**

- **Best time of year to sow the seeds: autumn**
- **Best time of year to collect the seeds: autumn**
- **Best seeding environment: outdoor protected bed**
- **Seed handling procedure: clean seed**
- **Seed preconditioning treatment: none**
- **Germination environment:**
 - **Optimum amount of moisture: outdoors**
 - **Optimum temperature: natural degrees F**
 - **Optimum amount of light: natural**
 - **The seeds require about 8-16 weeks to germinate**
- **Comments: An alternative seeding environment is greenhouse beds.**
- **Press RETURN for Grafting/Budding information**

The user would press RETURN and the grafting/budding section of information would be presented and the previous information would scroll off the top of the screen.

- **Grafting/Budding Information**
- **Grafting/Budding types: ' T', whip**
- **Grafting stock preference: no information**
- **Best time for grafting/budding: late summer**
- **Press RETURN to continue:**

Once all the available information on *Ilex opaca* has been displayed, the user must press RETURN to continue the program. The menu is again presented.

- **Search for 1) scientific name; 2) common name or 3)both; 4) retrieve information about a specific plant; 5)exit LPPI; 6) help.**
- **Enter choice:**

If the complete scientific name of the plant in question is unknown, the user may search for a plant by any portion of the scientific or common name or both. LPPI will simply search for a string of letters which might be contained in either the scientific or common name. In this example a search is executed by scientific name by pressing " and RETURN. The user would be prompted to enter a portion of the scientific name by:

• **Search for?**

The string of letters "junip" would be entered in this example.

If the search was not successful, a message would be presented indicating the plant was not found in the database. This means the string of letters entered was not found in any portion of the scientific name of plants in the database. The user may return to the main menu by pressing RETURN.

If the search was successful a list of the plants found with the string "junip" in the scientific name will be displayed. This list will be indexed according to the scientific name of the plants unless the search was performed by common name. The list in this example would include:

- **Juniperus horizontalis 'Bar Harbor'**
- **Bar Harbor Juniper**
- **Juniperus procumbens nana**
- **Dwarf procumbens juniper**
- **Juniperus prostrate variegata**
- **Variegated prostrate juniper**
- **Juniperus chinensis 'Blue Vase'**
- **Blue vase juniper**

From this list of plants, the user can determine the full scientific name of the plant for which propagation information is desired. The full scientific name would be entered after the question:

- **Would you like more Information? [(Y)es, (N)o]**

The user would enter "Y" and press RETURN or simply press RETURN to indicate more information is desired. The following statement would then be presented on the screen as:

- **Enter complete scientific name:**

The user would enter "Juniperus horizontalis 'Bar Harbor'" in this example and press RETURN. The scientific name as entered will be displayed and the user would be given a chance to proof the spelling of the name before the search proceeds. The screen would include the following statements in this example.

- **Juniperus horizontalis 'Bar Harbor'**
- **Is this correct? [(Y)es, (N)o, (Q)uit]**

If the name has been properly entered the user would enter "Y" and press RETURN or simply press RETURN. The information available on the plant specified would then be presented on the screen in sections. The display in this example would be as follows.

- **Propagation Information on Juniperus horizontalis 'Bar Harbor'**
- **Common Name: Bar Harbor juniper**
- **Plant type: evergreen ground cover**
- **Primary means of propagation: cutting**
- **Press RETURN for Cutting information:**

The user would press RETURN and the next section of information would be presented and the previous information would scroll off the top of the screen.

- **Cutting Information**
- **Cutting type(s): secondary**
- **Cutting maturity: semihardwood**
- **Best time of year to take cutting: late summer**
- **Hormone suggestion: no information**

- **Rooting environment for cuttings: intermittent mist**

- **The cuttings require about 4 - 8 weeks to root**

- **Comments: May root any time the wood is right; light brown changing to dark**

- **Press RETURN to continue:**

If more information is available, the above information would scroll from the screen as a new section is presented. If there are no additional sections to be presented, the main menu will be displayed so the user can choose to search for another plant, call the help menu or exit LPPI. After exiting LPPI the following message is displayed and the user is returned to the Ornamental Horticulture Sub-Menu of the VAX-Menu system.

- **End of LPPI Retrieval Program**
- **Ornamental Horticulture Sub-Menu**

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