

**Supplementary Table S1: Questionnaire and privacy statement for the survey of horticulture research among U.S. botanical gardens and arboreta.**

**Privacy Statement**

**Terms and conditions:** This privacy statement outlines how we collect, use, and safeguard the data you provide when taking our survey. Please take a moment to review this information carefully.

**Data Collection:** We may collect personal information, such as your name, email address, and other relevant demographic details. This information is gathered solely for the purpose of conducting the survey effectively.

**Purpose of Data Collection:** The data we collect is used for research and analytical purposes only. It helps us gain insights and make informed decisions to improve the field of horticultural research and our understanding of plant life.

**Voluntary Participation:** Your participation in the survey is entirely voluntary.

**Anonymity and Confidentiality:** We guarantee that all responses provided during the survey will be kept strictly confidential and anonymous. Your personally identifiable information (PII) will not be shared or disclosed to any third parties without your explicit consent, except as required by law.

**Data Retention:** We will retain your data only for as long as necessary to fulfill the purposes outlined in this privacy statement or as required by law.

**Third-Party Services:** In some cases, we may use third-party services to collect and analyze survey data on our behalf. These service providers are contractually obligated to comply with the same level of data protection and privacy measures as us.

**Legal Requirements:** We may share your information if required by law, regulation, or government request. However, we will make every effort to notify you of any such disclosure unless legally prohibited.

**Your Rights:** You have the right to access, modify, or delete your personal data provided in the survey. If you wish to exercise any of these rights or have any questions about your data, please contact us using the information provided below.

**Minors:** Our surveys are not intended for individuals under the age of 18. If we discover that we have inadvertently collected personal data from a minor, we will take immediate steps to delete the information from our records.

**Contact Information:** If you have any questions or concerns regarding this privacy statement or our data practices, please contact us at:

National Tropical Botanical Garden

Attn: Horticultural Survey

3530 Papalina Road

Kalaheo, Hawaii 96741

[mopgenorth@ntbg.org](mailto:mopgenorth@ntbg.org)

By participating in our survey, you agree to the terms outlined in this privacy statement. Thank you for helping us complete this survey!

### **Survey prompts**

**1. In What state or U.S. territory do you live?**

Answer: Selection of state dropdown menu.

**2. Are you professionally involved in horticulture?**

Answer: Yes/No.

**3. Please state your name**

Answer: Open ended

**4. How old are you?**

Answer: Sliding scale 0-100

**5. Name of Organization. If not affiliated with an organization, state 'other'**

Answer: Open ended

**6. How many in your organization are horticultural staff? Note: Horticultural staff in this study are workers who provide day-to-day plant care, ensuring plants receive components to grow properly. These staff also setup projects, conduct data collection, pursue pest/disease management, and horticulture equipment maintenance.**

Answer: Single text box

**7. About how many total employees work at your organization?**

Answer: Single text box

**8. Please define horticultural research in your own words (Max 200 words)**

Answer: Open ended

**9. How would you define horticultural excellence?**

Answer: Open ended

**10. What size would you consider the horticultural operation you are involved in?**

Answer: Multiple choice, single option:

- 0-10 acres
- 10-50 acres
- 50-100 acres
- 100-1000 acres
- 1000+ acres
- I am not involved in a horticultural operation

**11. How many years have you been involved professionally in horticulture?**

Answer: Sliding scale 0-60

**12. Which steps are required to successfully conduct horticultural research? Select all that apply**

Answer: Multiple choice, multiple answer option:

- Observe plant health
- Collect data
- Establish replication to achieve statistical significance
- Achieve necessary permits/certifications
- Document project design, and share with colleagues
- Identify horticultural problem or need
- Other (Please specify) \*with open ended text box\*
- None of the above

**13. What type of horticulture field are you involved in? (select all that apply)**

Answer: Multiple choice, multiple answer option:

- Plant ecology
- Agricultural production
- Ornamental crops
- In vitro cultivation

- Plant Pathology
- Soil or Microbiology
- Other (please specify) \*with open ended text box\*

**14. Select which horticultural research categories are currently happening at your facility.**

**(select all that apply)**

Answer: Multiple choice, multiple answer option:

- Propagation
- Pests/Disease
- Plant Ecology
- Plant Physiology (i.e. photosynthesis, respiration, or growth)
- Crop Improvement
- Landscape Design
- Species/Variety Conservation
- Soil Science/microbiology
- Cultivar or Variety Development
- Post- Harvest Technology
- Organic or regenerative agriculture
- Harvest/Yield
- Other (please specify) \*with open ended text box\*
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**15. Which areas of horticultural research do you feel are most needed in the coming years? Select up to three top choices.**

Answer: Multiple choice, up to three choices:

- Propagation
- Pests/Disease
- Plant Ecology
- Plant Physiology (i.e. photosynthesis, respiration, or growth)
- Crop Improvement
- Landscape Design
- Species/Variety Conservation
- Soil Science/microbiology
- Cultivar or Variety Development
- Post- Harvest Technology
- Organic or regenerative agriculture
- Harvest/Yield

- Other (please specify) \*with open ended text box\*
- 

**16. What do you perceive as major shortfalls toward conducting horticultural research?**

**(Select all that apply).**

Answer: Multiple Choice, multiple answer option:

- Not enough funding
- Staff/researcher expertise
- Personnel shortages
- Access to adequate facilities or infrastructure
- Institutional priorities
- Limited recognition as a unique field of research
- Other \*with open ended text box\*

**17. How would you describe your level of involvement with horticultural research?**

Answer: Multiple choice, single answer option:

- Heavily involved
- Periodically involved
- Involved once every few years
- Not involved at all

**18. Provide an example of a horticultural research project happening at your institution.**

Answer: Open ended

**19. Please name a model organization/institution that conducts horticultural research**

Answer: Open ended

**20. Where do you generally look to search for horticultural research findings?**

Answer: Multiple choice, multiple answer option:

- Databases
- Magazines
- Handbooks
- Personal Communication

- Other (please specify) \* with open ended text box\*
- None of the above
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**21. Are there any other comments you would like to make?**

Answer: Open ended

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### **Contact for Results**

This section is to gather information to follow up with results of the study and provide your responses to questions.

**Please provide contact information if you would like a copy of the study once published, as well as your survey results returned to you.**

Optional Answer: Open ended text boxes titled "Name", "Organization" , and "Email Address"