

## Careers in Horticulture and Plant Sciences PowerPoint Slide Notes



### Slide 1: Title Slide with Module Logo

### Slide 2: Title Slide: Horticulture and Plant Science Exploration

This presentation provides insight into the horticulture and plant science field. In particular, it provides information related to career opportunities within the field. This includes information on salaries, job opportunities, in addition to specific careers.

### Slide 3: When Considering a profession...

Question: For a potential career? Do you like being outdoors? Or indoors?

Certainly many, many careers available to take advantage of nature and the outdoors.

And plenty of opportunities, indoors too!

### Slide 4: Introduction

The following presentation will provide insight into careers and jobs available in horticulture and closely related plant science fields.

It will cover general and common questions one has related to horticulture?

What IS it? What about botany? And agronomy?

Then it will discuss a few aspects of 'misconception' of horticulture.

There will be opportunities to discuss and explore the different careers and opportunities.

### Slide 5: Learning Objectives

These are the general learning objectives associated with this presentation.

### Slide 6: What is horticulture?

So what exactly is Horticulture? How is it defined?  
Horticulture definition.

### Slide 7: Horticulture

Horticulture is diverse. Beyond the dictionary definition, Horticulture is...

There are LOTS of opportunities for people with a wide variety or interest in plants and people.

**Slide 8: Horticulture vs. Botany; Horticulture vs. Agronomy**

These are common questions or misunderstandings that people might have. What really is the difference between horticulture and botany and agronomy.

**Slide 9: Agronomy is...**

Agronomy, compared to horticulture, often focuses on larger scale production crops (examples; corn, wheat, sorghum, cotton, soybeans, etc.). Whereas, horticulture is generally 'smaller' scale production, of a variety of crops.

**Slide 10: Botany is...**

Botany, is a much broader and is often focuses on the physiology, plant structures, plant classification, plant ecology, plant distributions, etc.

Compared to horticulture, horticulture is more applied: that is the focus is on cultivation and growing the plants. Horticulturist use information from botanists in those different areas to better produce and cultivate crops.

**Slide 11: Plant Science Related Disciplines**

These are several closely related plant science and plant related fields that intersect with horticulture. Students interested in horticulture could easily study and gain knowledge related to these fields.

**Slide 12: Horticulture is:**

Again, Horticulture is diverse and offers many opportunities.

**Slide 13: Why consider Horticulture?**

There are several important reasons to consider horticulture. Of course, if nature, plants, and being outdoors if of interest, it can be a great fit!

The following slides address a few different concerns and questions that prospective students (and their parents, family, spouse, friends, etc.) have regarding the career and profession.

The major questions center around the following?

Jobs.

Pay? What does it pay?

Again, there are a wide variety of opportunities; both from applied and working outside or in a greenhouse for example, to scientific positions and working in a lab.

There are LOTS of Jobs. Employers are scrambling for high quality workers. In recent years, there have been more job openings than there have been employees to fill them!

### **Slide 14: Horticulture Misconceptions**

One of the first questions and concerns for many, and often a misconception for horticulture and some plant science related careers, is that the pay is low.

This is not necessarily true. Of course, pay is always relative and depends on a variety of different factors. However, there are many different career opportunities that can provide a substantial salary.

Often, similar to other professions, entry level workers can quickly move through ranks through promotions and raises relatively quickly with a strong work ethic and skill set.

Factors affecting the wage: Location, time of year, individual competencies, economy, etc. All very typical factors for consideration.

The information provided here are from the US Bureau of Labor Statistics, showing some general salaries across different areas.

### **Slide 15: Horticulture Misconceptions**

Here are data for select careers access from the Seed Your Future site.

Highest listed at the time : Mycologist

Lowest listed: Plant Propagator

Keep in mind there is wide diversity associated with these professions. And some of the professions are or can be hybridized; that is, a plant scientist could be working on plant propagation techniques and principles. The best of both interests and worlds!

### **Slide 16: Horticulture Misconceptions**

The information on this slide is based of a recurring USDA research project in collaboration with Purdue University.

It shows that there are a significant number of college graduates need in the short-term in the Food, Agriculture, Renewable Natural Resources and Environment fields.

The data shown here are the percentages of jobs in the different areas of focus.

### **Slide 17: Horticulture Misconceptions**

The information on this slide is based of a recurring USDA research project in collaboration with Purdue University.

It shows the number of jobs anticipated for each of the focus areas. There are significant number in the business/management and science/engineering areas!

### Slide 18: Horticulture Misconceptions

The information on this slide is based of a recurring USDA research project in collaboration with Purdue University.

It shows the number of jobs anticipated for each of the focus areas, along with allied trades. The allied trades are those that intersect and are highly intertwined with the focus areas.

### Slide 19: Horticulture Misconceptions

One major question or conception about horticulture and some plant science careers is that they are hard work—in terms of manual labor. And that CAN be the case and will be the case with several professions. They can require working in somewhat adverse conditions: heat and sun; rain and cold; snow; long days in limited production seasons, etc. And for some, this is a plus!

If that type of labor is not a strong interest, there are however, many careers that don't necessarily require working and hours in challenging conditions. Exploring some of those careers is encouraged!

### Slide 20: Why Consider Horticulture

Look at this picture for 5 seconds. What did you see? Make a list. First thing... How many of you saw plants? Tree? Grass? (fruits) Apples? Oranges? If you didn't notice those first...or second...or even third...maybe plant blindness.

Based on a recent study (see references), many people don't know what Horticulture is and or what it means! Thus if someone doesn't know what the field is, or what it is about and the opportunities, it's hard for someone to consider it for a potential career.

Part of the phenomenon tangent to not know about the field of horticulture is the concept of plant blindness. Plant blindness is the inability for one to notice or fully recognize plant as important parts of one's own environment. Moreover, plant blind individuals don't necessarily understand how plants affect our every day life.

### Slide 21: Careers Available in Horticulture

These charts are from the US Bureau of Labor Statistics Occupational Outlook Handbook (based on US Census Information).

The information here:

Table 1.

The table compares people with an agriculture degree (bachelor's degree holders) to people in non-agriculture fields (bachelor's degree holders)

The median wage is the midpoint. That is, half of the degree holders earned less than \$50,000 and half earned more than \$50,000 per year.

### **Slide 22: Careers Available in Horticulture**

These charts are from the US Bureau of Labor Statistics Occupational Outlook Handbook (based on US Census information).

The information here:

Table 2.

The table provides projections...what will the future of these occupations look like for the next 10 years?! 2019 to 2029

Also shows the % degree holders (BS and MS/PHD)

### **Slide 23: Careers available in Horticulture**

Segue into specific careers into Horticulture and plant science fields.

Maybe an extra credit opportunity for the student(s) that might get this?! ☺

### **Slide 24: Class Activity**

Have the students on their own or with small groups, brainstorm as many horticulture (and plant science related) careers that they can think of? See how many come up with the same careers. See who can come up with the most.

### **Slide 25: Careers available in Horticulture...**

1 of 3 slides listing several careers. These are adapted/referenced with the Seed Your Future and the National Association of Landscape Professionals (NALP) websites.

Seed Your Future: <https://www.seedyourfuture.org/>

NALP: <https://www.landscapeprofessionals.org/>

Would reference those resources.

### **Slide 26: Careers available in Horticulture...**

2 of 3 slides listing several careers. These are adapted/referenced with the Seed Your Future and the National Association of Landscape Professionals (NALP) websites.

Seed Your Future: <https://www.seedyourfuture.org/>

NALP: <https://www.landscapeprofessionals.org/>

Would reference those resources.

### **Slide 27: Careers available in Horticulture...**

3 of 3 slides listing several careers. These are adapted/referenced with the Seed Your Future and the National Association of Landscape Professionals (NALP) websites.

Seed Your Future: <https://www.seedyourfuture.org/>

NALP: <https://www.landscapeprofessionals.org/>

Would reference those resources.

### **Slide 28: Timely Opportunities**

Several of the previous career opportunities listed in the previous slides intersect with timely and interesting areas of concern for many (young) people.

Climate change is an important concern for not only the United States, but across the world. And younger generations especially, are becoming very active and engaged in how to better protect the Earth, while still being able to maintain quality of life.

There are many career opportunities in horticulture and the related plant science fields that intersect and can assist with addressing climate change.

Proposed activity: Select one of the careers and have the students identify at least one activity or way the profession could assist in addressing climate change.

### **Slide 29: Timely Opportunities**

The topic of Food and Food Security, safety and equity, like climate change are important concerns for not only the United States, but peoples across the world. People are currently very active and engaged in horticulture and plant science related fields can assist in providing more food, healthy and nutritious food, and food access for people around the globe.

There are many career opportunities in horticulture and the related plant science fields that intersect and can assist with these opportunities.

Proposed activity: Select one of the careers and have the students identify at least one activity or way the profession could assist in food security, safety, and/or equity.

### **Slide 30: Career Resources**

Seed Your Future is a national initiative to bring more visibility to Horticulture.

Provides links and videos for specific careers.

Provides research and information about horticulture and it's importance

Provides resources for teachers and students

### **Slide 31: Search Careers by interest...**

Here are more details of the Seed Your Future Site.

This slide is to highlight the current option for a student or person interested in the field to identify an area of interest (non-plant) or some area that they might excel in or might be wanting to integrate or mix in with 'plant stuff'. This site allows them to look over careers within horticulture and plant science that would allow them to have the best of both worlds.

<https://www.seedyourfuture.org/careers>

### **Slide 32: Career Resources**

National Association of Landscape Professionals

More information, for students related to specific career options (focused more on the landscape side of the industry).

<https://www.landscapeprofessionals.org/LP/Careers/Students/LP/Careers/Students.aspx>

**Slide 33: Career Resources**

American Society for Horticultural Sciences

This is the professional horticulture society of the US. They provide some resources for careers, more focused on research and academics. They also have a job board for viewing as well.

**Slide 34: Project Funded By**

This project was funded by USDA Secondary, Two-Year Postsecondary Education, and Agriculture in the K-12 Classroom Challenge Grant (SPECA) Award No. 2017-38414-26963.