



BALL HORTICULTURAL COMPANY
2020 SUMMER INTERNSHIP PROGRAM

For well over two decades, Ball Horticultural Company has offered a wide variety of internships to students majoring in Horticulture, Plant Science, Agribusiness, and related fields. Each year, our internship projects are linked to specific business initiatives, which encompass a range of horticulture disciplines including advanced research, breeding and genetics, marketing, business operations, production, and trialing.



All internships require a minimum of Junior-level standing at an accredited, four-year university or college. Historically, Ball interns arrive with significant academic and/or related extracurricular accomplishments, although consideration is also given to those students demonstrating exceptional promise. When applying for these internship projects, students should consider the following:

- All internships are offered during the summer months for a period of 10-12 weeks.
- Start and end dates are relatively flexible, depending upon the student's availability and the needs of the department; we prefer interns start no later than the day after Memorial Day.
- Unless otherwise noted, internships are located in West Chicago, Illinois, a suburb approximately 35 miles west of Chicago.
- Rate of pay is \$14.50 per hour. Students work a minimum of 40 hours/week; some internships require overtime during critical periods.
- We provide fully furnished and appointed apartments in a nearby apartment complex and absorb the majority of the rental costs. The student portion of housing is \$200.00 per month. Food, transportation and other living costs are the responsibility of the student. Students are required to have their own transportation since housing is not within walking distance from work locations and public transportation is not readily accessible.

- A major goal of the program is to expose students to multiple aspects of our business operations; presentations and tours of departments throughout the company are provided during the summer. Similarly, interns are expected to participate in company and industry events including AmericanHort's Cultivate '20 in Columbus, OH and Ball Customer Days.
- All internships culminate in mid-August with a final presentation made by each intern on his/her experiences and accomplishments; these presentations are made to members of Ball's Management Teams.
- The application deadline is February 28, 2020. Intern selections will be determined by March 13, 2019. All applicants will be notified of our decisions.



Students interested in pursuing one of these internships should forward a cover letter and resume to:

Ball Horticultural Company

Attn: Monique Hakkert

622 Town Road

West Chicago, IL 60185

630-231-3600, ext. 3182

E-mail: mhakkert@ballhort.com

<https://www.ballhort.com/Careers/Internships/>

SEEDLING DEVELOPMENT INTERNSHIP

WEST CHICAGO, ILLINOIS

Supervised by: Robert Conrad

Description

The student will work in our Premier Seed Research Lab on our Precision Multi-Seed Pellet (PMPL) program. We will study the effect of the process temperatures on the germination and seedling performance of various projects.

Principal projects include:

1. Make the PMPL product, sowing and growing of the product as well as quality evaluation.
2. Developing a test to see if oxygen is a limiting factor in multi-seed pelleting production. This will involve the use of a plate reader, and once again sowing and growing of the product.

Examples of the activities involved in these projects will include setting up growing facilities and grow-out standards for each crop, data collection and interpretation, and evaluation of technologies employed in seed testing. Use of proprietary seed testing methods will be employed. Participation in the evaluations of various controls will also be performed.

Requirements

General lab skills and ability to grow plants. We will train in all necessary steps of the process. It is a lab position and most of the plant growing will be done in chambers, not a greenhouse.

Junior or senior level student majoring in horticulture with an emphasis on propagation and young plant production research or greenhouse production is ideal. This internship requires intermediate-level proficiency with MS Word, Excel, Outlook and PowerPoint. Selected intern must be self-directed, have the ability to organize and prioritize their work, as well as work a flexible schedule during peak periods. Similarly, this hands-on internship requires that the student is able to work under a variety of environmental conditions, including heat and humidity for prolonged periods of time, as well as lift 20+ pounds and perform physical labor.

MARKETING COMMUNICATIONS INTERNSHIP

WEST CHICAGO, ILLINOIS

Supervised by: Katie Rotella and Allyson Mull

Assist Ball Marketing Communications with social media content for the Ball corporate and consumer brands. Primary responsibilities include developing content, videos, photography and blogs for various social platforms to increase traffic and engagement.

- Social channels include Instagram, Facebook, YouTube, LinkedIn and Pinterest. Candidate will also contribute content to the Ball West Chicago TV Bulletin Board for internal communication.
- Candidate will develop blog content for B2B and B2C channels. They will also document progress in The Gardens at Ball for ongoing photo archives of key plant introductions.
- For Ball corporate events (Darwin Perennial Day, Cultivate, Ball Seed Customer Day), they will create a comprehensive plan for photos, videos, interviews and social posts for the Ball brands.
- Duties may also include consumer events and local press opportunities to assist the Public Relations and Brand Managers.
- Candidate may also monitor and analyze competitor activity to increase Ball awareness to current campaigns.
- They will support Marketing Communications as needed on other projects, too, including photo library, project management, websites, etc.

Requirements

Junior or senior-level student majoring in horticulture, agribusiness or related field with an emphasis and/or strong personal interest in marketing and product promotion. Knowledge of social media platforms (i.e., YouTube, Instagram, Pinterest, and Facebook) is a strong plus, as are basic skills in digital photography and video production software (e.g., Premier, After Effects, Canva, Photoshop, etc.). This position requires a person who has good communication and a flair for creative work. In addition, individual should be a self-starter and have strong organizational skills.

BIOINFORMATICS AND DATA ANALYSIS

WEST CHICAGO, ILLINOIS

Supervised by: Megan Bowman, Ball Helix

Development and application of important molecular breeding and bioinformatics tools in rose (In partnership with Star Roses and Plants)

Description:

The prospective intern will work closely with Dr. Megan Bowman, Bioinformatics and Data Analysis Lead within Ball Helix Central R&D, and Laura Lara, rose breeder at Star Roses and Plants, to learn the fundamental concepts of bioinformatics and molecular plant breeding. The prospective intern should be an enthusiastic, self-motivated person who is interested in learning skills to work with “big data” in the plant sciences. The successful candidate should also be excited to learn about the application of plant molecular biology and bioinformatics in plant breeding through collaborative, real time communication of data analysis results with important breeding partners. The prospective intern will be primarily working in an office environment and will be expected to work at a desk for 6-8 hours at a time, with possible greenhouse and field experiences.

Justification for selected topic and likelihood for success:

- Mentor (Megan Bowman) has years of experience developing bioinformatics internships
- Collaborator Laura Lara has years of experience in both applied and molecular plant breeding techniques
- Data already in hand
- Analysis platform has both user interface and command line (in event of programming issues)
- Basis for understanding major concepts in bioinformatics/computational biology
- Basis for understanding major concepts in molecular plant breeding
- Student will leave internship with a tangible skill set in basic bioinformatics/programming and their application in molecular plant breeding

Skills required vs skills developed

Required: Attention to detail, enthusiasm, self-motivation, interest in plant molecular biology, basic computer knowledge (Microsoft products), experience in programming would be great but not required.

To be developed: Linux, version control (git), understanding of molecular breeding concepts, sequencing technologies and file formats, sequencing data quality control, basic understanding of core bioinformatics concepts (mapping, alignment, assembly, etc), basic pipeline development, basic Python, basic R as time allows and interest of student, interpreting and writing bioinformatics/genomics/molecular breeding literature.

Time requirements

- Considerable time at beginning to establish standards, expectations, foundations of the work (Weeks 1-3)
- Shifts to independent time for student to work through programming language and methods (Weeks 4-7) with daily check ins – student must be self-motivated!
- Then shift to finish expected project outputs dive into the biology and broader impacts of analysis work and the benefits to Ball (Weeks 8-10) – We found something, now what do we do with it? Ongoing communication with Laura Lara at SRP, connecting data analysis with molecular field breeding.

- Summarize summer project to highlight impacts for Ball, write up summary and document code (Last week of internships)

Set up for best chance for success

- Available computing resources (DNANexus platform, OneDrive space and computer)
- DataCamp modules – very low cost but high success rate
- Time set aside to devote to mentorship – balance with other priorities this summer. May and June especially.
- Interaction with fellow Ball Helix Central R&D team members – how does this science apply broadly?
- Opportunities to communicate science – internal presentation to Helix team, writing exercises

PROJECT COORDINATOR AND BUSINESS ANALYST INTERNSHIP

WEST CHICAGO, ILLINOIS

Supervised by: Justin Taylor, Ball Helix

Description

Learn best practices in project management of corporate Research and Development projects. Entire orientation of the internship is coordinated towards teaching best practices in project management and preparing to earn the certified PMP credential after graduating from University.

- Work across the portfolio of priority R&D projects to gain a broad understanding of the portfolio.
- Assist project managers with capturing meeting follow-ups, creating timelines, and meeting notes.
- Work with portfolio manager and senior leaders to learn how best to present cross project dashboards and reports.
- Earn documented training hours required to earn the certified Project Management Professional credential.
- Earn documented project experience as required to qualify for certified Project Management Professional.
- Create a plan for the next twelve months following the internship which will result in earning the certified PMP credential.

The student will learn fundamental concepts in project management and gain hands-on experience across many of the priority research projects in the R & D organization.

Plan:

- Weeks 1-3 – introduction to project managers and project teams, learn Ball SharePoint environment, learn about methodologies for project tracking and documenting follow-ups. Establish plan for completing 35 hours of PMP training during the internship.
- Weeks 4-7 – working with individual project managers, attending their meetings and assisting by capturing notes, creating gantt charts and task lists. Work with portfolio manager to create different portfolio dashboards, present options to stakeholders and gather feedback
- Weeks 8-10 – Adjust dashboards based on feedback, prepare final slide deck summarizing portfolio of projects incorporating insights gained from stakeholders. Continue to work towards completing certified PMP training hours.
- Weeks 11-12 – Present final output to project stakeholders, summarize summer's project to highlight impacts for Ball, prepare internship close out document including lessons learned and suggestions for improvement for next year's intern.

Students who are curious, like to work with people, enthusiastic, self-motivated, good attention to detail, and interested in earning the certified Project Management Professional credential after graduation should apply.

Requirements

Junior or senior level student majoring in horticulture, agribusiness, information systems, economics, plant biology or any other technical major is ideal. This internship requires proficiency with MS Word and PowerPoint. Selected intern must be self-directed, have the ability to organize and prioritize their work, and have a high attention to detail. Similarly, this internship requires that the student is able to work in an office environment and will be expected to work at a desk for 6-8 hours at a time. Student will also be asked to assist with wide ranging research tasks as they arise, a positive attitude is essential for these tasks.

Vegetables Production Research Internship

ELBURN, ILLINOIS

Supervised by: Cheni Filios, PanAmerican Seed

Description

Are you interested in vegetable research and want to get your hands dirty for the summer? Our program is developing new vegetable varieties geared for Fresh Market Farmers and Home Gardeners. We're looking for a motivated student who wants to participate in a research vegetable farm for the summer. You're not afraid to get dirty, have a passion for vegetables and want to gain more experience in vegetable production from sowing, transplanting, pruning to harvest.

Provide support for vegetable program activities and tasks including but not limited to:

1. High tunnels – tomato and pepper
 - a. Installation – sowing, transplant
 - b. Maintenance – staking, trellising, pruning and pest scouting
 - c. Collect and tabulate data - days to flower, ripen, Brix, and other data TBD
 - d. Harvest and data collection – yields, fruit counts, grading, measurements, etc.
 - e. Marketing Strategy development – identify market trends, leading varieties in marketplace, post-harvest requirements, data required for product launch
2. Field and container trials – tomato, pepper, cucurbits, herbs
 - a. Installation – sowing, transplant
 - b. Maintenance – staking, trellising, pruning and pest scouting
 - c. Collect and tabulate data - days to flower, ripen, Brix, and other data TBD
 - d. Harvest and data collection – yields, fruit counts, grading, measurements, etc.
3. Hydroponics – leafy greens and herbs
 - a. Trial execution - testing mix combinations, determining optimum seeds/pellet
 - b. Sowing, transplanting, harvest, post-harvest, photography
 - c. Collect and tabulate data
 - d. Marketing Strategy development - identify market trends, leading varieties in marketplace, post-harvest requirements, data required for product launch

Requirements

Junior or senior-level student majoring in horticulture, plant science, agriculture or related field. Experience in vegetable production is a plus, along with experience in data collection and statistical analysis. Comfortable working alone and in a team environment, confident in problem solving and self-organizing time management for multiple projects. Local travel for data collection and visiting farms approximately 10% of time. This hands-on internship requires that the student be able to work under a variety of indoor/outdoor environmental conditions, including heat and humidity for prolonged periods of time, as well as lift 50+ pounds and perform physical labor. Must have strong computer skills, specifically a comfort working in a Microsoft environment, and good writing/documentation skills.

Ball FloraPlant Product Development & Pricing Internship

West Chicago, IL

Supervised by: Eric Pitzen, Ball FloraPlant

Description

A leading breeder of vegetatively propagated plant varieties, Ball FloraPlant has won critical acclaim for its genetics and reliable supply of cuttings. We strive to solve grower challenges with high-quality products whose benefits are carried all the way to the consumer level.

Do you have a passion for landscape & patio plants as well as for business? Then product development may be a great place to enhance your skills. Product development is charged with moving new product ideas that solve growers' challenges into the commercial assortment through trialing, production, culture research, and developing marketing information. At each step of the process, you'll have to evaluate the information that you have to keep the product moving forward or re-work in some part of the process.

In this internship you'll have an opportunity to work with the product management team to collect information and photography on the summer performance on new plant varieties. Surviving the Illinois Summer is a key decision point in the launch of a new product. Then each product needs the right sales and price strategy to be competitive in the market. Part of this internship is to help our Business Planning & Supply Manager with pricing analyses.

Project 1: Support Product Management activities and tasks including but not limited to:

- Photography and data collection-analysis in Summer container trials
- Organize product management photography and create presentations for 2022 introductions
- Help prepare for and participate in the annual final confirmation meeting

Project 2: Support for sales and pricing analyses:

- Run and analyze reports to get insight in competitive pricing
- Analyze reports on price and sales history
- Build a model to segment current customers to better understand patterns
- Help prepare and assist with implementing pricing for the new 2022 new plant varieties

Requirements

Junior or senior-level student majoring in business, horticulture, plant science, agriculture, or related fields. Comfortable working alone and in a team environment, confident in problem solving and self-organizing time management for multiple projects. This hands-on internship requires that the student be able to work under a variety of indoor/outdoor environmental conditions, including heat and humidity for prolonged periods of time, as well as lift 50+ pounds and perform physical labor. Must have strong computer skills with proficiency in MS Word, Excel and PowerPoint.

Business Processes and Customer Satisfaction Internship

West Chicago, IL

Supervised by: Heather LaRocca, Ball Seed

Do you love excel but also like to investigate what drives customer satisfaction? The Customer and Supplier Relations Intern will have the unique opportunity to see our business from two perspectives while working on projects that are both customer facing and behind-the-scenes, and impact our day to day business.

Project 1: Customer Satisfaction Survey

- Administer our bi-annual Customer Satisfaction Survey to our top 3000 customer
- Analyze outcomes and formulate top findings
- Put together a presentation with the results that can be shared with key stake holders in the sales organization

Project 2: A-Z Supplier Comparison Chart

- Research competitor websites to collect data on product classes and forms
- Create a spreadsheet which highlights gaps of opportunity (BSC does not offer but competitor does) and the vice versa
- Identify and evaluate strategic sales opportunities

Various other analytical and administrative tasks will comprise the balance of your time. Examples of projects: Adding photos and culture recommendations to plant varieties in the database. Reach out to prospects and customers that have not ordered from us for a while over email. Assist with Summer mailing project.

Requirements

Junior or senior level student majoring in horticulture, agribusiness, information systems, economics, plant biology or any other technical major is ideal. This internship requires proficiency with MS Word, Excel and PowerPoint. Selected intern must be self-directed, have the ability to organize and prioritize their work, and have a high attention to detail. Similarly, this internship requires that the student is able to work in an office environment and will be expected to work at a desk for 6-8 hours at a time. Student will also be asked to assist with wide ranging tasks as they arise, a positive attitude is essential for these tasks.