

Seed Central

The seed industry cluster surrounding UC Davis

**The seed industry is a great
place for women to work**

Panel biographies & industry testimonials



Seed Central

The seed industry is a great place for women to work

Panel Presentation

University of California, Davis

January 14, 2016

Cecilia Chi-Ham, Director of Research Planning, HM.Clause



"The secret to building a successful career is to find the cross-section of your skills and your passions."

As part of the global management team for Research & Development, Cecilia is responsible for building R&D strategy and identifying new opportunities for innovation. Cecilia also provides direction for the UC Davis – HM.CLAUSE Life Science Innovation Center, a collaboration between the University and HM.CLAUSE that facilitates innovation by giving start-up companies the opportunity to thrive. Prior to joining HM.CLAUSE in 2014, Cecilia served as Director of Science and Technology at the Public Intellectual Property Resource for Agriculture, a nonprofit organization housed at UC Davis. The aim of the organization was the transfer of agricultural technology and intellectual property to developing countries and the private sector. Cecilia earned her BSc in Environmental Science and Organic Chemistry and a PH.D in Biochemistry before doing postdoctoral research at Michigan State University and UC Davis. She is a Registered Patent Agent with the United States Patent and Trademark Office.

Having grown up in Honduras, Cecilia has always been connected to the agricultural community, but her interests were piqued while at UC Davis when she had the opportunity to work with Francois Korn and Kent Bradford on developing the idea for Seed Central. That project is what first exposed her to the seed industry. Having worked at the University before, and now working for the seed industry, what fascinates her most is seeing how the innovations that come from public and private research complete the circle of development when they are transformed into new products, such as new seed varieties for farmers around the world.

Cecilia takes pride in working for the seed industry because it is inherently important in the quest to feed the planet. Coming from a developing country, she is keenly aware of the significance that agricultural productivity holds for economic growth and national security. As such, she finds it rewarding to work for a company that provides reliable and innovative seed products to farmers. Moreover, she appreciates the values that HM.CLAUSE and its parent company uphold, as well as the company's commitment to people, be they employees, farmers or consumers.

Her advice for job-seekers is to consider a career at a company such as HM.CLAUSE that offers employees the ability to contribute to the success of the company while also facilitating professional and personal growth opportunities.

Leonela Carriedo, Ph.D. Student, Plant Biology



I began my college years as a pre-med major. I am a first generation college student, and at the time, I thought that the only reason people went to college was to be a doctor, a lawyer or an accountant. I sought mentorship from many senior undergraduate students and they all recommended that I pursue research internships in order to make my medical school application more competitive. I heeded their advice, however, I had no clue what doing research meant or that one could even pursue a career in science. As a requirement for my degree, I had to take various biology courses, including a "Plant Diversity" class. While at first, I was not particularly excited by the idea of taking the course, I was quickly stunned and marveled in the complexity beauty of plant form and function. I gained a deep appreciation for plants, and I felt like I had gained intimate knowledge of something which people usually take for granted.

The following year, I had the opportunity to work at a hospital, and I quickly realized that the medical profession was not a good fit for me. At that point, I knew that I enjoyed research and I still had a profound curiosity for plants. The following semester, I changed my emphasis of study to Plant Biology. My courses in plant taxonomy and plant physiology piqued my interest in further learning about the genetic control of plant form and development, and that following year I started an internship in a lab at the Carnegie Institution's department of Plant Biology in Kathryn Barton's lab, learning how to manipulate gene sequences that control leaf polarity.

That experience was pivotal in my consideration of science as a possible career, and I was encouraged to apply to several graduate programs. I was most drawn to UC Davis and to Julin Maloof's lab for his work in understanding how the environment impacts plant development. At the time I joined the Maloof lab was transitioning towards working with tomato as a model crop system. Working with a crop was important for me, and I threw myself into projects revolving around understanding complex environmental stress responses at the physiological and genetic level.

Working within a model crop system has pushed me to learn more deeply about domestication, how wild species are used for crop improvement and also the challenges we will face attempting to improve our food security in our changing climate. My graduate experience has exposed me not only to a variety of research topics and experimental approaches, but also to how decisions about research are made. Part of my graduate education has been funded by the Office of Research at UC Davis under the Research Investments in Science and Engineering (RISE), that funds and encourages UCD scientists to work on high impact interdisciplinary projects that could open the door to new avenues of research, patents or external funding opportunities. This exposure motivated me to learn more about how research can be moved beyond the lab and be commercialized. These experiences prompted me to consider a career in the seed industry. Through several informational interviews with scientists within the seed industry and visits to local seed companies, I gained an appreciation of the high level of research and the collaborative approach in this industry, and I am excited to explore career opportunities in the seed industry.

Risa DeMasi, Partner, Grassland Oregon, Chair, American Seed Trade Association (2015/2016)



From as young as I can remember, I wanted to own my own business and to express myself creatively.

I initially explored the fashion industry, but unbeknownst to me at the time, my future seemed to be rooted in my past, on the family farm.

I found myself intrigued when two friends presented an opportunity with a fledgling seed company, and soon recognized its creative and entrepreneurial potential.

What followed was the compilation of small seemingly inconsequential decisions over time, fortunate opportunities, and a habit of throwing myself off (proverbial) cliffs to see if I will land." This resulted in an altogether different creative career and ownership, with two amazing and brilliant partners, of my own seed business.

In 2013 I was invited to take a leadership role in representing the cover crop industry in ASTA becoming the first woman on the board, and now have the privilege of serving as chair of the association this year. In this position, I've been able to travel worldwide representing the US seed industry and uncovering opportunities and challenges for growth and collaboration to meet the growing global demand for food, feed, fuel and fiber This adventure has provided some of the most incredible experiences and friendships imaginable.

I love that what I do makes a difference in the world, I love that I work with and cross paths with some of the brightest minds and leaders, and I love that opportunities continue to abound for anyone who opens their mind to possibilities.

Tamara Miller, Ph.D. Student, Crop Improvement



Some of my earliest memories as a kid growing up in Placerville, California, are of learning about plants and tending roses with my grandfather. He was a master gardener and instilled in me a love of botany, gardening, and in general an appreciation for the natural world, which sticks with me today. Even though later, when I went off to college at U.C. Berkeley, I initially wanted a career in medicine, I decided to pursue a path in genetics and plant biology because I remembered that even as a young person I found the extreme diversity and complexity of plants to be fascinating. I wanted to focus on how to leverage that diversity in a way that would impact human health.

After earning a B.S. in Genetics and Plant Biology I worked on a project at U.C. Berkeley to improve the nutritional quality of sorghum, a staple crop in Africa and Asia and one of importance for animal feed in the U.S., using a biotechnological approach. Even though the work I did on sorghum represents a possible way that genetic engineering can be applied to improve a trait that impacts human health, crop improvement as a discipline includes a much broader set of tools. In 2012 I joined the Gepts lab at U.C. Davis to learn about how genomics and plant breeding can be applied to improve crops, or more specifically, beans. I earned a M.S. degree in 2014 while working with the African Bean Consortium, which seeks to utilize next generation genetics technologies to improve disease resistance and overall yield in common beans grown in East Africa. In the near future I will be working on a Ph.D. in the Gepts lab, focusing on the genetics of resistance in beans to Angular Leaf Spot, a disease which affects many bean growing regions in Africa and Latin America.

I feel that many of the opportunities I have had throughout my life have been due in part to hard work, but also more importantly, to the influence of several fantastic mentors I have had. I may not have realized my true passion for plants and for nature had it not been for the guiding influence of my grandfather early in life, nor might my interest in bolstering human health through food production have been so strong had it not been for my mentors, who took it upon themselves to educate me about possible career paths I could take in plant science. I feel truly fortunate to be at U.C. Davis, learning about crop improvement, and besides following a career path in plant breeding, my imperative is to pay forward what my mentors did for me by educating young people about career paths in plant science and fostering a collaborative attitude about solving issues related to crop production.

Donna Harris, Tomato Pre-Breeder, Bayer Crop Science Vegetable Seeds



I grew up on a small beef cattle farm near Athens, Georgia where my dad was a part time farmer who raised wheat and soybean and full time research professional at the University of Georgia in the soybean breeding program. Thus, I developed a love for agriculture early in life. I chose to attend Georgia Tech after high school for mechanical engineering, but decided after a year and an internship to come back home to UGA and get my B.S. in Crop Science. I also obtained my M.S. and PhD at Georgia in Plant Breeding, Genetics, and Genomics. For five years, between my masters and doctorate, I was a corn breeder in industry.

Since July of last year, I have been with Bayer CropScience Vegetable Seeds as a tomato prebreeder located in Acampo, CA. It has been a fantastic experience thus far! I have enjoyed the change and the challenge of moving from row crops to vegetables. I also love the prebreeder role. In my opinion it is a great combination of academia and industry breeding. I have the opportunity to support breeding through the utilization of unadapted germplasm for gene/allele discovery work.

It has been said "the road to happiness is to fully develop your abilities and then apply them to doing good". I can't imagine a better place to be than the "field" we are in.

Mengyuan Xiao, Ph.D. Student, Horticulture & Agronomy



I am interested in crop genetics and breeding. I chose my major because I enjoy exploring the mysteries behind plant life and I also hope my future job could potentially contribute to some global critical issues like food shortage. Crop breeding is one of the most powerful tools to solve this problem, and genetics is the base for modern breeding. My career aspiration is to work as a crop breeder or genetics researcher in seed industry or public research institution.

Renée Lafitte, DuPont Research Fellow and Woodland Site Lead, DuPont Pioneer



Thank you for the opportunity to share my story with you. I started my career in plant science with a clear intention – to help stabilize global food production and reduce poverty. That may sound overly ambitious today, but famines were frequent from 1960-1980, and I had the example of pioneers like Norman Borlaug, M.S. Swaminathan, and others as role models. My training included a BSc in Botany, MSc in Agronomy, and PhD in Crop Physiology, followed by a post-doctoral position at the International Maize Improvement Center (CIMMYT) in Mexico. This is the center where Dr. Borlaug did his work on shuttle breeding for the semi-dwarf, disease-resistant wheat cultivars that supported the Green

Revolution. After 9 years in Mexico, I moved to the International Rice Research Institute in the Philippines, where semi-dwarf rice varieties were developed that enabled food self-sufficiency in Asia. For the next 11 years, I continued to live my dream of doing agricultural research in partnership with national programs to improve livelihoods for resource-poor farmers.

In 2005, I accepted a senior scientist position at Pioneer Hi-Bred International (now DuPont Pioneer) here in California. Pioneer also has a global mandate, and research at Pioneer enhances local productivity and affects the global export markets for staple crops like maize and soybean. I have found that the private sector has an exceptional level of focus and ability to deliver on goals. My work is around in-field phenotyping for stress tolerance, and the techniques we have developed have enabled the development of products that are grown across millions of acres. Crops that are resilient in the face of uncertain climate trends are critical to ensuring global food security, and the seed industry is a key player in ensuring their development and deployment. When you add to this the pace of technological advances in genetics, phenotyping, and information management, the seed industry is clearly both an exciting and highly relevant place to work.

Jenna Gallegos, Ph.D. Student, Plant Biology & Designated Emphasis in Biotechnology Program (DEB)



I grew up on a cattle ranch in a small community of dry-land farmers in Eastern Colorado. My fascination with genetics began with punnett squares in middle school, so I decided to major in biology at the University of Colorado in Boulder. In a freshman genetics lab, I was required to lead a discussion on science ethics and was assigned the topic of genetically modified organisms. Given my rural background, I was thrilled by the prospect of using molecular biology as a tool to help farmers improve yields and increase the nutrition of staple crops while conserving resources and reducing environmental impacts.

Upon enrolling in the plant biology graduate group at UC Davis, I found a community of scientists committed not only to making discoveries in agriculture, but also to sharing those discoveries through extension and outreach. As a woman from an agricultural background, I am passionate about engaging both concerned consumers and hesitant farmers on topics of new agricultural technologies.

Opportunities for collaboration between academia and industry at Davis such as the Seed Central events and the Designated Emphasis in Biotechnology program have introduced me to the type of fascinating research occurring at biotech companies, and the passion for communication and interdisciplinary collaboration among industry researchers. I plan to explore career options in both industry and academia that provide opportunities for science communication and outreach as well as novel and applicable research in agricultural biotechnology.

Jana Mentzer, US Row Crops Commercial Production Lead, Monsanto Company



I have the greatest job in the world! I work in an industry that is always changing & improving, utilizes cutting edge technology, with farmers that passionately care about what they do and want to help the world have a safe and secure food supply for generations to come. Now 20 years after my bachelor's degree, I've had multiple chances to go do something else. No matter how many great opportunities come my way, there isn't a single one of them that can compete with this industry what I can do with Monsanto.

Getting here involves some strategic thinking and a lot of serendipity. My summer job as a teenager was detasseling corn; a short duration, high paying job...both things that teenagers look for in a job! It is also a lot of work in a hot muddy corn field in July. After graduation, I proudly declared I would never touch a corn field again.

I became a chemical engineer from Iowa State and obtained a great job working for Monsanto making RoundUp®. I had the opportunity to move to St. Louis to be the US Production Planner for all our herbicide products and had full intentions of ultimately moving into further roles in that business and using my chemical engineering degree that I toiled to obtain. Then serendipity starts to enter the picture. While pursuing my MBA, Monsanto acquired DeKalb and Asgrow Seed businesses, among others. I was looking for a next role that would stretch me, while keeping me in St. Louis to finish my degree. A hallway conversation later and I was moving into our DeKalb business as the first female in our corn production team and first without an agronomic background. I really thought it would be a 3 year experiment that would clearly show I needed to go back to chemical engineering.

Fifteen years, seven locations, and four countries later; I am working in seed production and loving it. I've had the opportunity to be a process expert, a site leader, a planner, a large team leader in Canada, US, Argentina, and Chile. I have worked with corn, soybeans, canola, and 23 different vegetable species. Who knows what the next years will bring for this industry and my career, but I can't wait to find out!

Weiyuan Zhu. 2015 Master's graduate in Horticulture and Agronomy



I have always been a nature lover and wanted to solve sustainable development issues using creative approaches. In my previous research and work experiences in ecology, horticulture and international agricultural development, I have developed real-world understanding in food security, environmental conservation and global change. Serving in the public and non-profit sectors, I wondered how the private sector tackled the issues.

Last year, as a Business Development Fellow at UC Davis' Graduate School of Management, I extensively explored entrepreneurship and innovation management on large scale. The mindset transition from science to business was huge, but I enjoyed being stretched and embracing new commercial ideas. I realized the great potential modern technology has to contribute to the new economy. More specifically, in the food and agriculture sector, I identified the seed industry as the next field that I would explore.

Seed Central provides unique opportunities for people from academia and industry to meet. The presentations, field tours and networking events with industry professionals have motivated me to learn more about what the industry has to offer for my professional and personal growth.

Sonali Mookerjee, Lettuce Breeder, Enza Zaden



I grew up in a small town in India and no one in my immediate or extended family was associated with the seed industry. Naturally I had no idea that plant breeding could be a career option and I definitely didn't have any plans of moving to USA and working for major global seed companies. As expected, my decision to continue education in plant sciences was very 'unusual' and strongly discouraged.

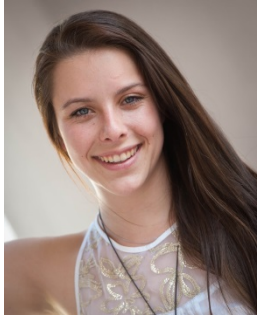
After completing a Masters (coursework) in India, I moved to Australia (University of Adelaide) to do a thesis-based Masters. My first exposure to plant breeding was in Adelaide when I was working as part-time Research Assistant for fruit breeding projects. Later on, I moved to the US to work on my PhD and I spent a significant amount of time working with breeders at the University of Florida and Michigan State University. I was a student participant of a consortium of Rosaceous Breeders and Molecular Scientists (RosBREED), working on improvement of Rosaceous crops, and that opened doors to interacting with many breeders working on other fruit crops.

When I was close to graduating from Michigan State University, like most graduate students I was faced with the choice of working in the industry or academia. At that time I had the opportunity to spend four months working on a Graduate Internship at Monsanto's Vegetables Division, where I interacted with several breeders and got to experience some aspects of working in the seed industry. My internship experience was so positive that I had no second thoughts about joining the seed industry.

After completing my PhD I joined Monsanto R&D IT, but soon I realized that I wanted to have a career in field breeding. I moved to a job as Lettuce Breeder with Vilmorin (Groupe Limagrain). Eventually I moved to Enza Zaden Research USA to continue as a Lettuce Breeder. Currently I work on breeding romaine and green leaf lettuce types for the USA market.

During my short experience in the seed industry I have met some amazing people who are great advisors, mentors, and friends, and whom I value. Overall my experience in the seed industry has been positive and I will encourage women (and men) graduate students to consider a career in the seed industry. I have experienced workplaces with wide contrasts in the ratio of men vs. women and I agree that having strong qualified women in management roles makes a positive difference. In my opinion, as workplaces start accommodating a more diverse group of employees (diversity in gender, nationality, etc.), women and men will be welcomed and accepted as individuals based on their qualifications and abilities, and not because of their gender and other attributes.

Valerie Wuerz, Undergraduate, Plant Biology



Throughout my childhood, my family worked to spark my curiosity and foster my desire for exploration. Now in college I am eager to continue on this path through research and learning.

I currently work in a plant pathology lab with professor Rizzo, where I am able to gain more insight into what options I have in my future.

As I complete my undergraduate college degree, I plan to continue learning more about how I can use the knowledge I have gained to address the different issues that we face as a community.

Iris Tzafrir, Commercial Product Lead, Chair of Women's Leadership Network, Syngenta Seeds, Inc



I grew up in a small agricultural community in the northern Negev desert of Israel. My community raised barley and wheat, vegetables and citrus trees. Growing up, I did not plan to explore a career in science and technology since I did not have role models to follow such a path. It was thanks to my high school teacher that I fell in love with biology. During my first degree, I came to realize that I was interested in doing science that can translate into commercial applications.

In graduate school I purposely chose a plant pathology project with field application potential. Studying how a virus moves from cell to cell, I discovered a segment of the virus DNA that can drive transgene expression in plants and went on to patent and license the invention. This was my first exposure to a key step in translating science for commercial applications--securing intellectual property and working with partners who are in position to develop a nascent technology into products.

Since graduation I worked in several roles in the agriculture industry: research, licensing and intellectual property, commercial negotiation, and marketing. For about ten years I worked with multi-functional global teams to negotiate and manage transactions and alliances between my company and universities, startups and other companies. In the last two years, I moved to brand management of a corn product portfolio and work closely with both the sales and research teams. The most interesting roles are the ones that require collaboration of experts from different areas.

A couple years ago I was asked to serve as the Chair of our Women's Leadership Network at Syngenta, an opportunity that allows me to share my and others' experiences with women who are interested in building their career in agriculture.

Randi Jimenez, Ph.D. Student, Horticulture & Agronomy



I earned a BSc in Plant Biotechnology. I chose to study biotechnology out of high school because it was my favorite class in my favorite subject, biology. As for the plant emphasis, I have always wanted to work with plants since I was a little kid.

While working on my BSc at UC Davis, I took plant breeding as an elective because the lab sounded fun, and between the course itself and the field trips, I was hooked. Several faculty members helped me make my decision, and ultimately I wound up as a MSc student in Hort&Ag. With the help of my MSc advisor, I was able to write a grant and earn a National Science Foundation Fellowship, which allowed me to continue on to a PhD program.

When I finish my PhD, I hope to enter the seed industry as a plant breeder. I love the incorporation of diversity into programs, and I always wind up picking out fruits with unique sets of traits as my favorites.

Anna Ball, President & CEO, Ball Horticultural Company, Illinois, USA



I grew up in the flower seed industry, although never with the thought that I would be working in it. It was a very male dominated industry then of course but things have changed dramatically. Our seed industry is the best kept secret in the broad world of agriculture - it is big enough to have lots of possibilities but small enough so one person can have a big effect. And it is a great industry for women.

I always thought being a woman in business had a lot of advantages. You may have to work harder to prove yourself, but that isn't all bad! Play up your strengths and ignore your weaknesses. Work hard. Try to find a job in which you can integrate your work and family and don't have to "balance" them. I never believed in balance; it is boring.

If you have a job you love, of which there are many in the seed industry, you don't differentiate so much between work and home. They can run together in a rich and wonderful way. Sometimes you go all out at home and sometimes you go all out at work. And sometimes work and home become one.

I encourage you all to join the seed industry and go for it!

Patty Buskirk, General Manager/Partner, Seeds by Design Inc. and Terra Organics LLC California, USA



As the Managing Partner for both Seeds by Design and Terra Organics, I oversee the research & development, production, sales & marketing and administration activities of the two companies.

I am a California native and already knew as a teenager that I wanted to work in agriculture. I studied agronomy and ag business at California State University Chico. Upon graduation in 1981, I accepted a position in Gilroy as an assistant brassica breeder. I moved back home to Northern California in 1989 to start a family and continue my seed breeding career. In 1994, I teamed up with partners to start Seeds by Design.

I consider myself very lucky because I have experienced the seed industry as a friendly, family-based industry. Many of my work-related friends are like family to me. I thoroughly enjoy my career choice and I love the everyday challenges and ever changing world of seed production, research and trialing. Research, variety selection and trials are my true passion.

Seeds by Design and Terra Organics typically grow anywhere from 5 to 19 acres of trials annually. We have an annual luncheon and open field day every August to showcase our passion for growing and our varieties to customers, vendors and our community. Being a breeder and marketer of multiple vegetable species, I embrace the challenge of testing many new varieties every year, and I look forward to the new set of challenges which the climate and seasons bring for business. My main breeding work has been for the home garden industry. I love to see new generations of gardeners discover the benefits and advantages of growing your own food and flowers in your back yard.

I remember well my first ASTA meeting in 1995: it felt like I was the only woman in an ocean of seedsmen. I still attend that annual event and nowadays I love to see the faces of the many seedswomen surrounding me, including my own daughters for the first time in 2016.

Veronique Heyes, Regulatory Affairs Manager, Germains Seed Technology, United Kingdom



With degree qualifications in Economics and Modern Languages, as well as professional qualifications in translation and interpreting, I had little idea of where to go when I left college. Coming from a long line of teachers, it was expected I would enter the profession. There was a big drawback however, my preferring the company of adults rather than of children and my distinct lack of patience, so I discounted this option, much to my mama's chagrin (think of the long vacations...).

Having earned some pocket money while studying by taking on interpreting and translating commissions, I knew I was not cut for the grueling schedules of simultaneous interpreting, and translation work bored me to tears, no matter how well paid that was.

I still started my working career as a technical translator with a small UK distributor of a German manufacturer of elevator motors and ventilators for industry. Other duties soon came my way in dealing with our travelling reps' enquiries and putting offers and quotes together. I could work out the technical requirements for ventilating computers to industrial pig sties. As I sat mesmerized in sales meetings, I longed to have my little company car and get on the road to visit those exotic customers. This traditional business however did not consider women worthy of an 'outside job'. I left after 3 years.

I started as a commercial assistant with Nickerson Seeds, on the strength of my language abilities and was given the responsibility of managing agents and distributors in French and Spanish speaking countries. I was fortunate to be located in a plant breeding station, and took every opportunity to learn about our crop, sugar beet, over coffee with our plant breeders, and going out with our field workers to tend to field trials. I loved every minute of it, and my hunger for knowledge was truly fired up.

Within a year I had been negotiating tenders and seed supply contracts in Syria, Lebanon, Chile, Argentina and Morocco, in the latter negotiating in person with the National Buying Agency in Rabat. They had not seen a woman in a negotiating capacity before and this caused quite a stir. They learned to quite like the harmonious yet business like proceedings and our business and trust grew substantially over time. I made business trips to countries I had not imagined I would even go to in my wildest dreams. I was hooked, I loved the seed business, and I loved the people.

8 years later, I was approached by Germains and joined the company as Sales and Marketing Manager. I am still here, 25 years later. My career at Germains has been varied and exciting. The first decade saw me working with the team to create a strong European business for our sugar beet seed technology, such as the introduction of seed priming to the UK and USA in the late 90's, and growing our vegetable seed technology businesses in Europe. In 2000, I joined the Board of Directors as Marketing Director. We launched our first web site in 2001, rebranded our enlarged business entities under one banner; it was a fascinatingly creative time in my career. I then moved on the Board to become Business Development Director in 2005, an exciting time when sugar beet seed priming really took off in Europe and brought new customers.

In a context of increased regulation on our industry, Germains made a strategic decision to focus regulatory competence concerning seed technology and seed treatment. I was keen to

take on this role, and became Regulatory Affairs Manager, having strong connection to seed technology working groups in ESA and ISF.

My advice to women in business, and to men for that matter too, whatever that business may be, is never, ever, give up, however it is as well to be truthful to yourself when it is time to move on to get out of a rut, as I did in my first job. I was a foreigner in a new country when I started out. I was a young woman in a predominantly male world in my chosen segment of sales and marketing and agriculture at the time was much more traditional in its gender bias than it is today. I never found it to be a limiting factor, but you have to brave, and courageous to earn trust and respect over time. I was never professionally qualified to do the jobs I have held in the seed industry, but I was fortunate to be given the opportunity to learn and contribute to the highest level, the Board. On the business side, it's about relationships and trust between people. After 33 years spent in and around the seed industry, I am still in love with it and its people, and there is no other place where I would rather be.

Heather Kibble, Home Garden Vegetable Division Manager, Sakata Seed America, Inc. California, USA



My southern California hometown is surrounded by fields and orchards, but surprisingly a career in agriculture did not occur to me as an option until I joined the workforce after college. The only science related careers I was aware of were medicine and laboratory work- neither of which interested me. I started college as an accounting major but the suits and big city accounting firm careers which attracted my friends didn't appeal to me. I switched to a degree in consumer resource management with a plan of becoming a personal credit counselor. After college I worked in customer service at a local seed company. A whole new world appeared to me when I learned about the business behind all the fields I had seen growing up. After several years in the workforce I completed an MBA.

I have had several different roles, from customer service to sales to training to sales management, and I found that women are present in agriculture in the harvest crews, in the sales and customer service offices, assisting breeders in the fields, and in the marketing and HR departments of the major agriculture companies. Where women are not found as much is in the board room, as breeders in the field, in sales, sales management, and high level research and development roles. The same can be said for people of color.

One way we can increase diversity in research and in management is to put our fears aside and jump in. We need to do hard things. We need to make some sacrifices in our personal lives. We need to be OK with working with people who may not look or think just like us. My favorite days at work are spent with my very diverse co-workers discussing vegetable varieties in the field. I would never have dreamed that I could get paid to evaluate vegetables with people from Japan and France in a field in south Florida. Our industry is fun and crazy and always changing. I think the more diverse the board rooms and the R & D departments are, the better our companies and eventually our world will be.

Balancing work and a personal life should not be considered a woman's issue, it should be a key issue for society as a whole. I was raised mostly by a single father and I watched him struggle with many of the same conflicts that I now face myself as a parent. Our society needs to find a way to insure that parents can be present for their children - attending a sporting event, dance recital, or concert once in a while. We all need to be able to care for a sick loved one or take somebody to the doctor. Strong families make for strong workplaces and improve society as a whole. Having both a successful career and a personal life requires some thoughtful planning, flexibility, and a willingness to make allowances sometimes.

I encourage young women and girls to consider a career in agriculture. Roles like mine have the best of both worlds. I spend some time outside, traveling, visiting fields, learning about people (and vegetables) from all over the world and plenty of time in an office and interacting with people - and my beloved spreadsheets.

I don't know of an easy job in agriculture, but the best things in life aren't easy. The best things in life require sacrifice, focus, and hard work, resulting in a sense of accomplishment. If women are willing to step up, they can be part of fulfilling the important mission of feeding the world through agriculture.

Sharan Lanini, Raw Product Food Safety Manager, Fresh Express California, USA



I have worked for over 30 years in the production agricultural industry in the western marketplace, primarily in the fresh produce segment. But it all really started when I grew up on the family farm in the Salinas Valley of California, as a farmer's daughter, who inherited an innate love for agriculture. Believe it or not, some of my current colleagues and our business partners at Fresh Express were also with me in my youth, where we all participated in 4-H or FFA—they are now our growers and Ag business

executives in the industry.

After graduation from UC Davis, within a couple weeks of coming home, I had a job in agriculture at the USDA Research Station in Salinas working for the sugar beet breeder, and that was my intro to the seed business. I eventually worked for over 18 years for Moran Seeds, which became Harris Moran Seeds (now [HM.Clause](#)), starting out in the R&D department and eventually working in marketing and sales. My love of science and my degree from UCD helped to chart my path. But also getting a job that involved working in the fields and with growers whom I had known my whole life ended up being a dream opportunity.

However, at the time I entered the field in seed sales there were no women professionals out there, except a couple of reps for major agrichemical manufacturers, but virtually no woman actually working directly with the growers. Imagine a young woman trying to sell growers vegetable seed, it was definitely a new concept for the farmers at the time. Even being a native to the area and having a degree was no help with the growers who demanded proof that I was up to the job. Once I proved to them that I was there to help them, and would always stand up for what I said with the facts and science, answer their questions, and continue to provide consistent customer service, they accepted me as a woman in the field. But this principle of demonstrating integrity, professionalism and consistency really is an asset that will lead to success in any job.

I was never afraid to work hard, nor to get my hands dirty, so part of my initiation in the seed industry involved long hours of testing for incompatibility, setting up isolations and growing pilot crops, as well as hand pollinations, cleaning seed, and practicing basic vegetable seed production - learning the basics of production agriculture. I can not emphasize enough the power of learning about the agricultural business from the bottom up. You will gain tremendous insights, empathy and understanding that will serve you well throughout your career. Later when I moved into seed sales, I put in hundreds of variety trials and worked closely with the plant breeders to learn everything I could about our new varieties. Working closely with those skeptical growers and helping them get insights into the emerging new varieties also paid off with record sales in my Salinas Valley sales territory. Another must is to get a mentor or two, and learn all you can about every aspect of the business.

The seed industry offers tremendous potential for building a career, whether you are a scientist or interested in learning the business, marketing and legal aspects of an industry that offers opportunities both domestic and international. Get a solid education and don't be afraid to get your hands dirty by learning all aspects of production agriculture, it will pay off. Get involved in the industry and your agricultural community too.

Aleta Meyr, President, Ransom Seed Laboratory, California, USA



A traditional role: taking over the family business. Not so usual: a daughter taking over a woman-owned business that was started in Los Angeles in 1933 by her mother, Elizabeth (Betty) Ransom. I didn't doubt that I would have a profession as I grew up in a family with strong, independent professional women as role models. Most of my college years I thought I would do something different, but I kept ending up in the lab working weekends and summer vacations. Being an avid gardener all my life, I liked hanging out in the lab as a child and often took the discarded sprouts and planted them out in the garden. Growing seeds, using my botanical and horticultural education and applying them in such a practical, satisfying business led me down the path to a profession in the agricultural world.

So today, as president, CEO, general manager and Registered Seed Technician at The Ransom Seed Laboratory, Inc., I have spent some 40 years, my whole career, in this fascinating agricultural community. It is so layered, from global giants trying to feed the world to the small farm down the road that grows edible flowers for exclusive gourmet eaters.

I have intentionally kept the lab as a small business, 10 employees, as it suits my style of management and personal goals. Along the way I have learned that to keep a small business solvent, I had to acquire many skills, including customer service, hiring and training personnel, bookkeeping, small repairs on just about any piece of equipment, and, of course, seed testing which I am passionate about. When we started out, we did all our data reporting using a manual typewriter with carbon paper copies. I have especially enjoyed the challenge of moving to computers and keeping up with technological advances, where all data can be accessed and sent all over the world in a few seconds. And, I am still able to engage many hours a day with hands-on basic work, yes, just counting sprouts and looking for weed seeds in bulk samples.

Early in my career I began to go to workshops and conventions, networking with other people in my profession and staying connected to the many facets of the seed world. This became an essential element to keeping the lab a vibrant, active member of the larger global agricultural community. I've come to realize the passion of this community, to be an essential link in the food chain and fulfilling basic human needs. And, at the same time we get to work with an array of biological species which are fascinating, frustrating, chaotic and a source of constant new discoveries.

And lastly, in the midst of running this small business and sometimes working long hours, I had the pleasure of raising a family of three on our family farm, and even enjoying a few hobbies.

Nathalia Moretti, Lead Biologist, Trait Product Development



My grandfather was a potato grower in Brazil, and I grew up hearing about his passion for agriculture. However, it wasn't until my High School senior year that I decided to study agronomy. My first experience with plant breeding happened by chance at the end of the Agronomy degree. I was looking for a hands-on opportunity abroad and I applied for an internship at UC Davis to work at the Dry Bean Breeding Program. I had a great experience there and I got fascinated with the idea of creating new varieties with improved traits that would help growers to produce more and better manage their crops. Therefore, when I went back to Brazil, I started working at Monsanto with corn foundation seed production. I demonstrated interest in research, so after working with seed production for over a year I was encouraged by my supervisor at the time to start a master's degree.

I moved back to California and received my master degree in Plant Science from Fresno State. After working for few months at the Dubcovsky Lab at UC Davis with barley breeding I started working with Dow AgroSciences. I started at Dow working with field screening of drought tolerant corn and now I supervise a media lab of soybean transformation. I go to work happy every day. Being in the Seed Industry and helping with crop improvement is very rewarding, and I encourage any graduate young woman from related areas to try it.

Jennifer Raset, US Row Crops Quality Management Lead, Monsanto,
Missouri, USA



I never imagined a career in agriculture... Both sets of my grandparents grew up on farms in Iowa, and that was (unfortunately) the last generation of farmers in my family. I began my university studies in the School of Engineering at Washington University in Saint Louis, and after three years, decided that the study of culture, language, and business was my true passion. I studied abroad for two summers in Mexico, majored in Spanish, and dreamed of a career in international business. After graduation, I worked in both the printing and clothing industries in import/export logistics and customs compliance. While working, I obtained an Executive Master's degree in International Business from Saint Louis University. Supply chain experience led me to Monsanto where I initially led the export group for crop protection products. As Monsanto evolved its agricultural footprint and began to focus on seeds and traits, I had the opportunity to learn about the seed business...US distribution of seed and crop protection products, product positioning, warehousing, and producing, moving, and selling seed globally. This included developing an understanding of phytosanitary and labeling requirements. Over time, I developed an expertise in state/federal seed regulations and seed regulatory affairs and policy.

I volunteered time and became involved in the American Seed Trade Association (ASTA), chairing both the Seed Industry Relations and Phytosanitary Committee, and in the International Seed Federation (ISF), where I represent ASTA on the ISF Phytosanitary Committee. My career in the seed business has enabled me to travel the world, work with federal, state, and international regulators, and collaborate with competitors on mutual goals. It has provided me with the opportunity to influence and provide input on the development of an international phytosanitary seed movement standard, and build relationships/networks with seedsmen and seedswomen across the globe. After 15 years in agriculture and with Monsanto, I reflect on the incredible leadership opportunities I have been given and how I have loved and developed personally and professionally with every role/assignment along the way....being a part of the seed industry, the challenges, exciting new technologies, meeting farmers/customers, business and leadership development, working with talented and bright colleagues, cross-functional collaborations, and building lasting friendships. I am currently enjoying a challenging role in the US row crop seed production area where I am responsible for US row crop seed quality, stewardship, and compliance.

I am a single mom and have raised a strong daughter, now on her own journey and away to college. I have always felt comfortable with my own work/life balance, perhaps because Monsanto is incredibly supportive of all employees in this area. I have always felt included as a woman in agriculture, and have been treated as an equal by colleagues at Monsanto and within the industry. The seed industry is rewarding, exciting and diverse. I encourage young women to only imagine the possibilities and follow your passions. Women in ag continue to have bright futures and an incredible opportunity to help feed the world, working with talented and bright colleagues, cross-functional collaborations, and building lasting friendships. I am currently enjoying a challenging role in the US row crop seed production area where I am responsible for US row crop seed quality, stewardship, and compliance.

I am a single mom and have raised a strong daughter, now on her own journey and away to college. I have always felt comfortable with my own work/life balance, perhaps because Monsanto is incredibly supportive of all employees in this area. I have always felt included as a woman in agriculture, and have been treated as an equal by colleagues at Monsanto and within the industry. The seed industry is rewarding, exciting and diverse. I encourage young women to only imagine the possibilities and follow thier passions. Women in ag continue to have bright futures and an incredible opportunity to help feed the world.

Lara Timmerman, CEO Pop Vriend Seeds, the Netherlands



I had no intentions of working in agriculture at first. I was mainly interested in an international career. After a business degree and some years in the US and UK, my father asked me to join the family seed breeding company in the Netherlands. That was quite the change. Moving from a large publishing & marketing firm in Boston and London to the spinach fields of California, the seed production sites in Tanzania, and the trial fields in the Netherlands was a challenge.

It was completely different, but oh! so rewarding. I have no regrets of the past 15 years. Every day we get to go out and work in and with nature. Every day we get to help growers around the world growing a crop with which to feed their family, their village or whole parts of the country. Combining cutting edge technology with the beauty and challenges of nature is exciting and rewarding. Working to make the world more healthy is a worthy reason for getting out of bed every morning.

Rebecca Turner, Onion Prebreeder , Bayer CropScience Vegetable Seeds, Oregon, USA



As an undergrad I was fortunate to have several internship opportunities with seed companies and plant science groups both in the U.S. and abroad. I was pursuing a Genetics major, so a career in plant breeding was a logical step to bridge my studies with my interest in agriculture, and I felt like private industry was the best fit for my goals and ambitions. This path led me to pursue a PhD in Genetics and Plant Breeding. Choosing to complete a PhD over a MS degree gave me more flexibility and choices when searching for a position. Another important choice I made as a grad

student at UC Davis, was to attend many conferences to network with other industry members outside of academia, which led me to my current position with Bayer Vegetable Seeds.

My position in PreBreeding focuses on trait and germplasm development. With a heavier focus on the Research portion of R&D, it surprised me at first how similar it seemed to working as a postdoc. The position is as flexible as you make it, and each of the R&D team members has a say in what projects the team works on, so long as they bring enough convincing evidence and a logical reasoning to justify the task. I've had the opportunity to travel to several countries and regularly get to meet with colleagues from all around the globe. Travel demands, while seasonal and dependent on the crop you work in, are generally adaptable to the needs of each person's family.

Coming from academia where female students can sometimes outnumber males, I didn't think about the balance of women vs men in the workplace right away. In fact, I feel a strong presence of women at the scientist level, especially at the U. S. sites, though there are noticeably fewer female plant breeders than males. Men do seem to be more numerous in the seed industry in some European regions, but we are starting to see the dynamics shifting and we even see women appearing in the upper management levels. These differences may be more related to a shifting culture of teaching young girls about their opportunities in science than to any other cause. After just a year and a half into my career in industry, I will soon be taking a short leave of absence to start a family. My colleagues have been extremely supportive and I have not felt like I will be left behind by stepping away for a short time. Instead I feel like I have a larger family, composed of my coworkers, to help me balance my role and my life outside of work.

Karen Withers, Export Manager, Pennington Seed Inc. Oregon, USA



My love of agriculture and travel began at a young age. I grew up on a small family farm in Oregon, where I was involved in almost every area of 4-H and FFA, from livestock to home economics, public speaking and foreign exchange. No doubt these experiences shaped my personality and interests. After a summer home stay in Japan at the age of 12, I knew that I would pursue a career in international agriculture.

I received my degree in Agricultural and Resource Economics with a minor in Japanese from Oregon State University. Given that my focus was on international business, I did a one-year study abroad in Tokyo.

This experience not only enhanced my language and cultural skills, it also broadened my knowledge of international business through classes and work experience. I followed this with a summer internship at the United Nations in New York City to work on research and globalization issues.

Upon graduation, I began my career in Portland, working for Columbia Grain International on wheat exports. I couldn't have asked for a better start to my career, but my heart was not in the city. I soon moved back to my hometown and began a career at Pennington Seed, Inc. in nearby Lebanon, Oregon. I hadn't initially intended to pursue a career in the seed industry, but growing up in what is known as the "Grass Seed Capital of the World" it was probably inevitable that I would find my way there - and I haven't looked back since. The opportunities are abundant.

As a woman in the seed industry, I knew I was outnumbered from the beginning. Yet, I have never felt inferior to my male colleagues nor the need to work harder to prove myself equally capable. In 2013, I was the first woman to receive the Young Seedsman of the Year award (yes, "Seedsman"!) from the Western Seed Association. The same year, the American Seed Trade Association (ASTA), established in 1883, for the first time elected a woman to be one of top three officers: Risa Demasi , who is now Chair of the association. The seed industry has evolved greatly in recent years and there are now many outstanding women in management and leadership roles, in Oregon, nationally and internationally. The path has been well paved for me and all these women to be judged by our abilities and not discriminated by gender.

Balancing work and life can be a challenge, especially with two young children. I couldn't have this career without the great support of my husband and family as well as the "family first" environment at Pennington Seed. The company's support and flexibility allow me to not miss out on the important moments in my children's lives while still succeeding in my career and traveling overseas. The industry as a whole has also shown that family is important and often incorporates events at association meetings for kids of all ages. My children love being part of this and as a mother I appreciate that I'm not put in a position to choose one or the other.

The seed industry is a great place for women to grow, be encouraged, feel like they are part of a family, enhance their skills and see the world.

