IN AGRIBUSINESS QUARTERLY JOURNAL

INDUSTRIALHEMP

GREAT POTENTIAL DESPITE ROADBLOCKS P3

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Women in Agribusiness is heading west for our first time in Denver, Colorado. Join us as we bring this thriving agribusiness community of women to the Mile-High City for more industry forecasts and trends, professional skill sessions, and unparalleled networking.

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LETTER FROM THE DIRECTOR

Hello Friends,

Here at Women in Agribusiness "headquarters," we constantly focus on the amazing accomplishments of women both in the agribusiness fields, and in the world in general. We were recently reminded on International Women's Day of the achievements and struggles of women around the world. And we are looking ahead to April 10 when we will recognize Equal Pay Day, the date in 2018 until which the average woman must work in order to earn the same amount as the average man in her position earned in the 2017 calendar year.

I am blessed to work with amazing women (and men!), some of whom are pictured here, to bring you not only our annual *Women in Agribusiness Summit*, but also the inspiring news and stories in our *Quarterly Journal*.

From data points about female CEOs, researched in hopes of finding similarities in their experience that can be used to help advance other women, to "how we got here" stories from three remarkable women in our



The Women in Agribusiness Maine team celebrates the end of another successful conference. (I to r) Carrie Vita, Amber Jost, Joy O'Shaughnessy, Keri Hayes, and Kaitlin Mathews.

new feature, Women to Watch, we hope to spark our readers on their personal path to greatness.

Our interview with Karen Ross, Secretary of the California Department of Food and Agriculture, highlights a woman who is not only a leader in the country's ag community but also a farmer. Author, speaker, and coach Orna Drawas encourages all of us to take control of our success by creating a plan and sticking to it.

And looking forward to our annual Summit this September in Denver, we highlight the contribution that Colorado is making to our industry and spotlight some of the challenges that the industrial hemp segment is facing while they work toward greater acceptance of this versatile commodity crop.

I hope you find something in this issue that motivates you on your own path to success, and I hope you will let us know about women who have made a difference to you as we all work toward a time when Equal Pay Day is a distant memory.

Joy O'Shaughnessy Managing Director Women in Agribusiness

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A publication of WOMEN

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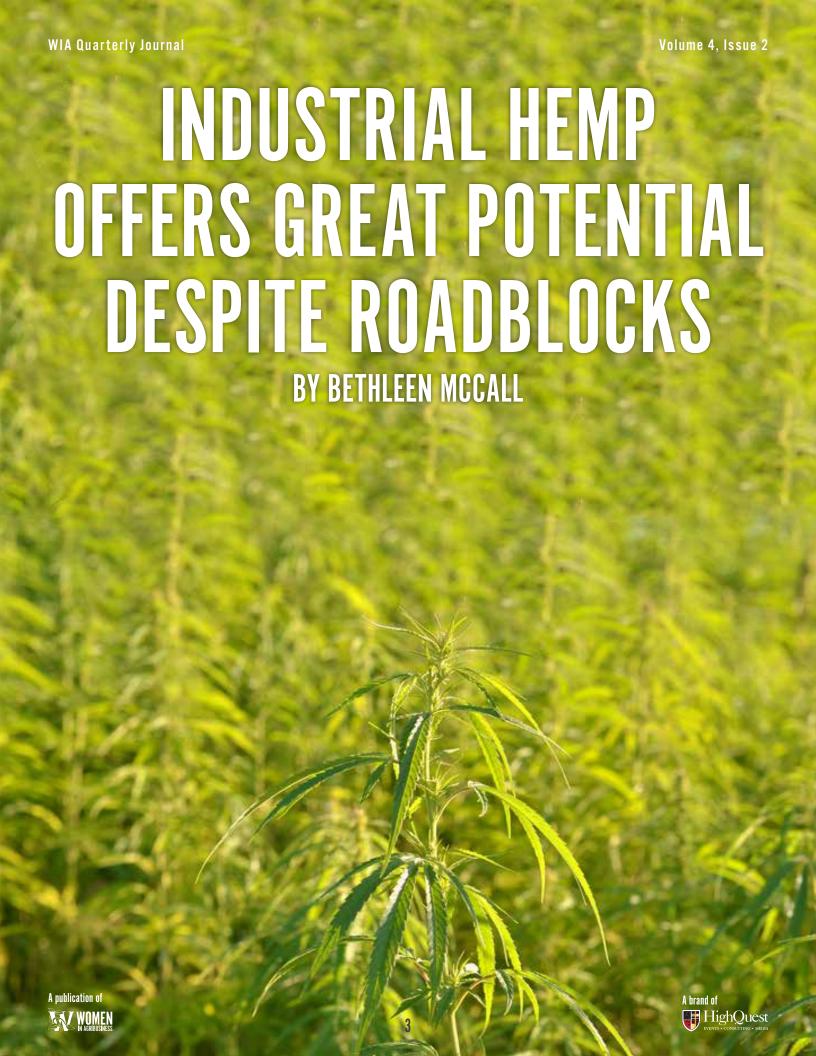
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Cannabis is making a comeback that could lead to tremendous gains for U.S. producers and processors.

While much of the focus on the legalization of the growth and production of cannabis has revolved around recreational and medical use, the real boon for U.S. farmers and processors will more likely come from the many industrial, food, and feed uses of this versatile plant.

Prior to the early 1900s, industrial hemp was used in thousands of products, most prominently textiles, rope, and paper. The Marihuana Tax Act of 1937 that defined hemp as a narcotic drug put a damper on much of the production of the crop, although farmers were still encouraged to grow hemp for fiber and oil during World War II.

Further regulation, competition from other industrial materials, and anti-drug sentiments led to the further decline of the crop. By the late 1950s it had basically disappeared from the U.S. landscape. Much of the world followed the U.S. lead, criminalizing its production. Now cannabis is returning to the scene due to legalization efforts in many states and changes to the regulation of hemp in the 2014 Farm Bill. The current legislation designates a cannabis plant as industrial hemp if it has a less than 0.3% Tetrahydrocannabinol (THC) content. A higher percentage of this psychoactive constituent would classify the crop as marijuana. Scientists and growers are recognizing the benefits of this plant that is sustainable, hardy, fast-growing, and an excellent source of plant protein.

AN ALTERNATIVE CROP IN SO MANY WAYS

The industrial hemp plant can be harvested for four primary components: fiber – the exterior of the stalk; hurd – the sponge-like interior stalk material; seed; and flower. China and neighboring countries in Southeast Asia have dominated the global fiber market for decades but are quickly transitioning towards seed production. Canada has been a major seed crop producer within North America. U.S. pilot programs, created by the changes in the 2014 Farm Bill, have focused on cannabidiol (CBD) and high-producing phytochemical products to date, but seed production is expected to grow more rapidly in the coming years.



Industrial hemp has many different potential end products, most notably food for human consumption. It also can be used as a natural fiber in applications such as construction materials, biomass plastics, textiles, personal care items, and nutraceutical products.

Section 7060 of the 2014 Farm Bill created an opportunity for individual states to create a regulatory framework and participate in industrial hemp production. Currently, 34 states across the U.S. have legislation allowing industrial hemp production in some manner.

Twenty of those states participated in cultivation during the 2017 growing season. While there is no official nationwide accounting for total industrial hemp acreage, it is estimated that just under 26,000 acres were planted in 2017. Colorado leads the nation in production with 9,890 acres followed by Oregon (3,469), North Dakota (3,064), Kentucky (3,000), and New York (2,000).

In the current economic environment, agriculture producers are more willing to experiment with alternative crops because traditional commodity prices remain low. Industrial hemp is a fairly simple addition to farms since there is no specialty equipment required for planting or harvesting seed and fiber varieties.

CATCHING UP TO THE REST OF THE WORLD

According to a March 2017 report by Renée Johnson, an agricultural policy expert for the Congressional Research Service, approximately 30 countries in Europe, Asia, and North and South America currently permit farmers to grow hemp. China (textile products) and Canada (food and feed ingredients) are the leading importers of hemp products to the U.S.¹

Restrictions in many countries were lifted in the 1990s, a time when interest in hemp products was also growing in the U.S. but American laws remained in place. In spite of this head start, acreage and production of cannabis has remained relatively low worldwide, leaving the door open for U.S. growers to supply a large portion of the growing demand.

Hemp Business Journal estimates the total retail value of hemp products sold in the U.S. in 2016 was







US\$688 million. They forecast the hemp industry will grow to US\$1.8 billion in sales by 2020, led by hemp food, body care, and CBD-based products.²

ROADBLOCKS LITTER THE ROAD TO FULL-SCALE PRODUCTION

The largest barrier for the industry is that industrial hemp is still not federally recognized as a traditional agricultural commodity and is inconsistently regulated from state to state. Due to the lack of an overarching policy, the USDA, the Federal Reserve, and other traditional players are left with uncertainty as to how to treat industrial hemp producers and ancillary businesses.

While the 2014 Farm Bill opened the door for farmers to legally grow industrial hemp again, and federal appropriations have blocked the Drug Enforcement Administration (DEA) from interfering with the growth, transportation, sale or use of industrial hemp grown in compliance with the bill, the crop is still subject to U.S. drug laws. The DEA continues to categorize all cannabis varieties, including industrial hemp, as Schedule 1 drugs under the Controlled Substances Act. Growers must obtain permits from their state Department of Agriculture in order to be Farm Bill compliant. Federal agencies also maintain strict restrictions on the marketing of hemp and its products.

These additional hurdles add to the uncertainty for farmers considering allocating land for cannabis production.

Another key example of barriers to entry and the risk placed on producers is crop insurance. Currently no RMA/FCIC-backed crop insurance products are available for large scale industrial hemp outdoor production. There are limited insurance policies to cover general items such as equipment and groups are working on self-insured pools in a handful of states. This topic is expected to be addressed in the upcoming Farm Bill, but any new products will likely not be available until the 2019/2020 season.

Lending is an area where industrial hemp producers and processors are at a disadvantage. USDA programs administered through the Farm Service Agency (FSA) that can typically be used to access capital to finance infrastructure build-outs at lower interest rates are unavailable. Four years following the passage of sec. 7606, misinformation about industrial hemp prevails in the banking industry. Some banks and other major merchant services still do not allow accounts for hemp businesses because they think they will have to file suspicious activity reports. This issue is improving as more people are becoming educated.

Due to these lending issues, entrepreneurs are experiencing difficulties getting traditional loans to finance infrastructure builds so growers are finding it difficult to locate a processor within a reasonable distance to which they can ship the raw material. In response to this, there has been a push to develop mobile processing units that can get the raw product ready for value-adding, thus saving on freight cost. Although these innovations are a good start, there is plenty of room to service this emerging market.

To date, individual wealth and private equity has fueled the majority of existing infrastructure buildouts. The other major factor impacting processing infrastructure is a bit of a chicken versus egg issue – the lack of available raw product to process. Farmers are reluctant to produce more raw material than they have contracted, and processors are disinclined to build larger processing facilities because there aren't tens of thousands of acres in production.

HEMP GAINS TRACTION AS A FEED INGREDIENT

In 2017, the Colorado Department of Agriculture (CDA) was directed by the state legislature to review the feasibility of industrial hemp byproducts as animal feed ingredients. After a





stakeholder review process, six conclusions were reached. Most notably, it was decided that since animal feed ingredients are subject to regulation by both the U.S. Food and Drug Administration (FDA) and state governing agencies, the primary focus should be on gaining federal approval of industrial hemp as an animal feed. Additionally, submission of a Food Additive Petition to the Center of Veterinary Medicine at the FDA would be the most effective means of dismissing any concerns around safety.3 Similar feasibility studies are underway in Indiana, Kentucky, and North Dakota. Seed, or derivatives thereof, will likely be the first feed products to be approved. Long term, forage, and non-seed portions of the plant are also expected to enter into the market.

HIGH PROTEIN CONTENT FUELS HEMP-BASED FOOD DEMAND

The seed is a highly nutritious plant-based protein, is gluten free, and contains all 20 amino acids in nutritionally significant amounts and in a desirable ratio.4 Whole hemp seeds, hemp nut or heart (the interior of the seed), hemp shell, and hemp oil are the four primary ingredients for human consumption. Industrial hemp is a great addition to the plant-based proteins market, boasting an average of 31 percent protein with most varieties. According to Business Insider, the global plantbased protein market was US\$8.35 billion in 2016 and is estimated to reach US\$14.22 billion by 2022 at a compound annual growth rate (CAGR) of 5.9 percent during the forecasted period.5 Seed and oil are the biggest consumables to date, but protein powders, gluten-free breads, cereals, and "health bars" are rapidly growing. Evo Hemp, a Coloradobased company, and its co-founder, Ari Sherman, were recognized by Forbes as a "30 under 30" in their food category. In New York, hemp leaves are being marketed as "the next Kale," a distinction which allowed the state's program to allot US\$10 million to develop the industry.

LEGISLATIVE ACTION COULD SPARK GROWTH OPPORTUNITIES

The Industrial Hemp Farming Act of 2017 (H.R.3530) currently has 42 cosponsors. If passed, the bill would amend the Controlled Substances Act to exclude industrial hemp from the definition of marijuana. If this bill were to pass it would give a clear pathway for industrial hemp to be treated like other agricultural commodities.

The industry also anticipates seeing more language in the pending Farm Bill related to industrial hemp production. Target actions include a more expansive definition of the plant, guidance of interstate transportation of genetics and ag products, and federal water use and pilot insurance subsidies.

The initial four years of the pilot program have been a tremendous success. Consumers demonstrated a demand for these products long before Congress initiated sec. 7606 and have responded by buying more hemp than ever before. State Departments of Agriculture have supported the development of the program but the DEA and other federal agencies have kept barriers in place that have been detrimental to the growth of the segment. The industrial hemp industry is looking for consistent policies and regulation in order to build a national framework for success. If the U.S. ag industry plays a more active role in the next iteration of the pilot program, we could see a tremendous opportunity to grow the market share for this emerging commodity that offers an excellent source of plant protein for feed and food use. W

ABOUT THE AUTHOR

Bethleen McCall is currently the Vice-President of the Colorado Hemp Industries Association. She has been involved in industrial hemp policy and production since 2014. She is also Executive Director of the Yuma Conservation District and a City Councilwoman.

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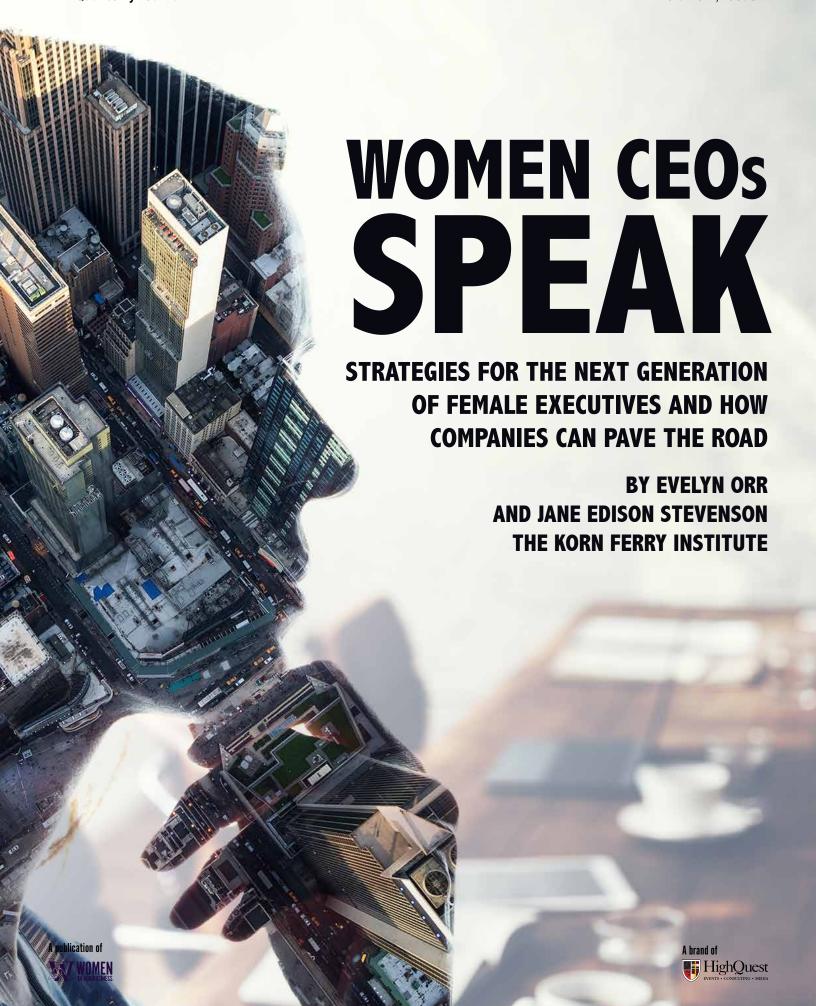
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In November, 2017, the Korn Ferry Institute, with the support of The Rockefeller Foundation, published an extensive report on their study of female CEOs in Fortune 1000 companies. The *Women in Agribusiness Quarterly Journal* has received permission from Korn Ferry Hay Group, Inc. to reprint the Executive Summary and some key findings. To download the full report, please visit https://engage.kornferry.com/womenceosspeak.

EXECUTIVE SUMMARY

When roughly 94% of Fortune 1000 chief executive officers (CEOs) are men, what qualities drive the 6% who are women to the most elite reaches of corporate leadership?

To find out, the Korn Ferry Institute studied 57 women who have been CEO—38 currently and 19 previously—at Fortune 1000-listed companies and others of similar size. We analyzed structured interviews with all 57 women and the results of psychometric assessments taken by two-thirds of them.

Among the key findings:

Few set out to be CEO

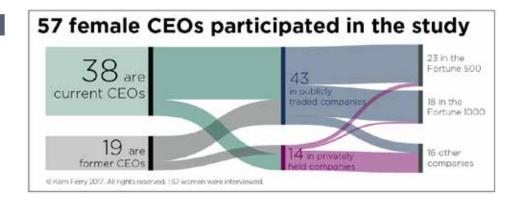
Only 12% of the women always knew they wanted to be a CEO. More than half gave no thought to being CEO until someone explicitly told them they had it in them.

Starting out in STEM

More than 40% of the CEOs started out with college degrees in science, engineering, or math—twice as many as those with a background in the arts and humanities (21%). About 19% studied business/economics/finance.

No single path to the top

We discerned four distinct career approaches the women took. While some zigzagged, eager to learn new things, and some focused on driving innovation and growth, only a few concentrated primarily on strategic career experiences aimed at becoming CEO.



Seeking out challenge

Being driven by challenge was a standout attribute for most of the women we studied. Their assessments also showed low desire for predictability in their work. These women didn't just prefer difficult and unpredictable work assignments, they sought them out.

Motivated by purpose and culture

The CEOs interviewed said they were motivated by a sense of purpose—the thought that one's company could have a positive impact on its employees, community, or the world at large. In 68% of the interviews, CEOs gave detailed descriptions of creating a more positive culture—23% considered this among their most important accomplishments.

A different mindset as CEO

These CEOs appear to highly value the contributions of others, and moreover concede that they can't single-handedly bend the future to their will. This showed up in assessment scores related to humility and confidence, areas of the greatest divergence from our general CEO benchmark.

INTRODUCTION

CEOs may be the most scrutinized people outside professional athletes. Magazines and data companies analyze their education, career history, tenure, stock performance, and more. And yet too little is known about what distinguishes the women in that group. The reason is profound in its simplicity: Until quite recently, there were so few female CEOs that a statistically valid study wasn't feasible.

Only 6% of Fortune 500 CEOs are women in 2017. The Rockefeller Foundation, which funded this research, wants to change that. The target of its 100x25 initiative is to have 100 women leading Fortune 500 companies by 2025.

Korn Ferry's portion of that initiative, called the CEO Pipeline Project, seeks to learn from the women who have already succeeded at becoming CEOs. What common strengths and areas of development can companies focus on to build robust pipelines of high-potential women?

Although the 100x25 initiative targets the Fortune 500, that list of companies didn't include enough women for Korn Ferry's study. Expanding the scope to include Fortune 1000 and similar-size companies, the Korn Ferry Institute was able to enlist 38 current and 19 former CEOs for structured interviews. Two-thirds of them also took Korn Ferry's executive psychometric assessment.





The research was designed to develop a more nuanced understanding of

- the common personal attributes and workplace experiences that aided and prepared these women to become CEOs;
- the factors that led to promotions at key junctures in their careers; and
- how the women overcame the organizational barriers they faced

in order to make research-based recommendations as to how organizations can identify, develop, and support more women to become future CEOs.

DEMOGRAPHIC AND CAREER DIFFERENCES

To ground this research, the Korn Ferry Institute gathered publicly available biographical data about all female CEOs in the 2017 Fortune 1000 and compared that to a parallel sample of male CEOs who led companies of the same revenue size. Seen in demographic silhouette, male and female CEOs look very similar. The differences are subtle, but they add up.

The women were, on average, four years older when they got their very first CEO appointment, though it is worth noting that in our male sample many CEOs were their company's founder. Overall, the women accrued more diverse experience by working in a greater average number of senior roles, functions, companies, and industries.

Only 24% of the women CEOs and 22% of the men were hired as CEO directly from outside the company. The rest were groomed internally. Of those, the women were promoted to CEO slightly faster, on average, than the men (11.98 years compared to 12.41 years).

The Fortune 1000 data also reveal that female CEOs are not spread evenly across industries. They are in greater numbers in consumer goods, utilities, and finance (particularly insurance), but less represented in industrial companies and the health and life sciences.

The skills boards are looking for in future CEOs

When considering the skills profile for a CEO, boards prioritize these competencies, shown here by average ratings ranked in order from most critical to least critical.







100X25? ATTAINABLE, BUT THE PACE NEEDS TO ACCELERATE

In the higher-revenue Fortune 500, women held the CEO role at 32 companies in mid-2017, up from 12 a decade earlier and two in 1997.

The Rockefeller Foundation's 100x25 goal is attainable, but even the current exponential rate of change (doubling every five years) is too slow to meet this target.

The average tenure of a CEO is eight years; hence, by 2025, an estimated 500 opportunities will arise when a woman could be named CEO. Currently, 24% of C-suite executives are female. If a similar percentage of the next CEOs are women, that would result in 116 female CEOs in 2025.

Of course, it is not so simple. The biographical data on Fortune 1000 CEOs show that women, on average, worked for a company for nearly 12 years before being promoted to CEO. And not all female senior executives are truly positioned to ascend to CEO. Multiple studies indicate that 90% of new CEOs come directly from roles with line responsibility (defined as having profit-and-loss or direct client responsibility), most typically president, division president, or chief operating officer.

There are other wrinkles as well. Data from Korn Ferry's Executive Search branch reveals that it currently takes 269 days on average to place a female CEO in the United States—30% longer than the 207 days to place a male CEO. There is no such delay in Europe-Middle East markets, where women are placed 14% faster than men, or in Asia-Pacific, where they are placed 22% more quickly. This suggests that boards of directors in the United States still aren't as open to female CEOs as boards in other countries.

The 100x25 goal is not assured, but it is possible. What we learned in studying female CEOs and how they rose within their companies will enable us to accelerate the possible. W

Lifelong learning Focus on finding the next challenge Four different Bird's-eye career approaches Focus on getting an prepare women enterprise perspective for the CEO role Innovation/growth The way women CEOs approached their careers Focus on building new business tended to fall into one of these four patterns. Career building Focus on pursuing a path and avoiding distractions © Korn Ferry 2017. All rights reserved.

TAKEAWAYS FOR ORGANIZATIONS

Before becoming CEO, women have worked in a slightly higher number of roles, functions, companies, and industries than men. This suggests that some might be catching up with key experiences, or waiting or moving to be in position when a CEO opening arises.

The pool of C-suite women is small, and that situation is made more dire by how few are in the roles that lead directly to CEO, and how women appear concentrated in certain industries.

TAKEAWAYS FOR WOMEN

Not all C-suite roles are a path to CEO. The women CEOs we studied gained an edge by changing roles and functions more often.



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MOMEN TO MATCH

CELEBRATING UP AND COMING WOMEN IN AGRIBUSINESS

Women to Watch is a new recurring feature in the Women in Agribusiness Quarterly Journal. With our annual event and our extensive network in agribusiness, we feel lucky to cross paths with so many amazing women. But women are often reluctant to toot their own horns so we are here to do it for you!

What constitutes a candidate for *Women to Watch*? She may be a woman who has run with an exciting new idea in the ag space. She may have carved out a position in an area that has traditionally been male-dominated. She may be someone who has moved quickly through the ranks and has achieved a high status in her company. Or she may be someone who you look at and say, "Wow! I

wonder how she did that?" We welcome you to nominate someone in your circle who strikes you as a *Woman to Watch*. We look forward to devoting this space to sharing their stories.

Please join in recognizing our first *Women to Watch.*

A publication of







Lisa Curtis

Founder & CEO Kuli Kuli

Lisa Curtis is the founder & CEO of Kuli Kuli, the first brand to introduce moringa to the U.S. market. Moringa is a fast growing leafy tree that thrives in hot, arid climates. The green superfood derived from it is

recognized around the world as a powerful tool for improving nutrition due to its nutrient density and resistance to drought. Curtis founded Kuli Kuli after working with moringa as a Peace Corps Volunteer and has grown the company into a multi-million-dollar enterprise with products in over 6,000 stores. Prior to Kuli Kuli, she served as the communications director at Mosaic where she helped bring in over \$5M in investments in solar through their online marketplace. Previously, Curtis wrote political briefings for President Obama in the White House, served as a United Nations Environment Programme Youth Advisor, and worked at an impact investment firm in India. She writes for a variety of outlets including *Forbes* and *The Huffington Post*. Curtis has been recognized as a StartingBloc Fellow, a Wild Gift Better World Entrepreneur, an Ashoka Emerging Innovator, and a Udall Scholar. She was honored as a 30 Under 30 Leader by GreenBiz, the University of California, and Forbes. She is a frequent speaker at social impact and natural food conferences on topics such as supply chain transparency, building buzz, fundraising, and millennial entrepreneurship.

What experience has been most influential in your success?

I first began a moringa project while serving in the Peace Corps in Niger. That project was interrupted due to a terrorist attack. That experience gave me an incredible amount of motivation to finish what I had started in Peace Corps by launching a moringa company in the United States. That motivation has given me the grit to stick through the roller coaster ride of starting a company.

Where do you see yourself in five years?

Kuli Kuli is pioneering a new way of developing a sustainable supply chain from the ground up while building up a market for an entirely new ingredient. I see us expanding to other nutrient-rich plants from around the world and providing sustainable, value-added superfood products that help Americans lead healthier lives while also nourishing the communities where they are sourced.

What advice would you give to someone following your path?

Recognize what you don't know and surround yourself with great mentors, advisors, and teammates to help fill in the gaps. No one is good at everything. By clearly recognizing the areas where you need support, you'll be able to focus on your strengths and grow even faster.



Joelle Faulkner

President & CEO Area One Farms

Joelle Faulkner is a Rhodes Scholar, a Fulbright Scholar, and was named a Future Leader in *Canada's Most Powerful Women: the Top 100*. She is the President, CEO, and co-founder of Area One Farms, an agricultural

finance company that partners with best-in-class farm operators to purchase farmland and build family farms. Area One Farms brings a unique shared value approach to agriculture that creates value for the farmer, investor, and the wider community. They have over \$150 million invested in a dozen partnerships across Canada and are quickly becoming the most desirable way to finance family farm expansion.

What experience has been most influential in your success?

Prior to starting Area One, I was trained in designing medical devices through the biodesign program at Stanford University. Medical devices have very real design constraints because the patients who need them are often too ill to accommodate you, so the device needs to accommodate them. For example, some patients who have heart failure cannot lay down completely, so anything that you design to treat them has to be used or implanted while the patient is sitting at a minimum 30-degree incline. This taught me that, to succeed, I needed to really understand constraints and design within them. Our business, Area One Farms, is built on creating value for, and sharing value with, the farm partner, investor, and wider community. When I set out to make us the most desirable financing choice for expanding farmers, I remained serious about sharing all of the value we could create. I believe that is the most critical thing to our company's success and, ultimately, my success.

Where do you see yourself in five years?

I would like to be doing more of the same: offering the best financing option for farmers. We want to continue working with farm partners to expand their ability to maintain rural life for their families and the families of their employees. I hope that the organization creates significant value and is able to continue to share that value with all of its stakeholders.

What advice would you give to someone following your path?

Every time you say yes to something, you need to say no to something else, so it is important that you decide what is critical for success. In our case, it was critical to determine how to share value between our farm partners and our investors in a way that creates value so that both parties end up better off than they were without the other. Maintaining that view and partnership structure, however, has not been easy because much of the world operates with the idea that more for me has to be less for you.







Chris Chavis

Senior Director, US Food Animal Business Unit Lead Elanco

Chris Chavis currently serves as senior director of Elanco's US Food Animal Business where she oversees all aspects of Elanco's swine, cattle, feedyard, and poultry operations.

Previously, she served as Elanco's Global Value and Pricing leader. Prior to joining Elanco in 2017, Chavis worked at Monsanto, gaining 23 years of global experience in biotechnology, plant, and animal agriculture. She held a number of U.S. and global leadership positions including serving as the U.S. Seed Treatment Business unit leader, EMEA marketing and product management leader for Vegetable Seed Division, U.S. Row Crops National Brands marketing lead, U.S. commercial leader for dairy, and the technical services lead for the Swine Business. Chavis earned both bachelor's and master's degrees in animal science from Purdue University, and obtained an MBA from Washington University in St. Louis. She is a member of the National Charity League.

"Chris is very hard working and she has endless energy and passion for what she's doing. Secondly, she is intensely customer focused. Chris spends time directly with customers to understand what they need and how she can help them succeed. Finally, Chris is a leader. She supports and enables her team while constantly raising the bar on them and holding them accountable. She also has fun. You can usually hear Chris laughing from quite a distance. People like being around her!" — Mike Frank, President, Retail Nutrien

What experience has been most influential in your success?

I was lucky enough to have strong mentors early in my career, and I was smart enough to listen to them. Two leaders in particular challenged my thinking in a way that would force me outside of my own box, and that made all the difference. Through that experience, I was able to develop and appreciate diverse ways of thinking about business. To be a true leader, you have to be able to not only embrace different views and experiences, but find ways to tap into them and grow them. That's what my mentors did for me. Now, I try to pass that down by mentoring early-career professionals.

Where do you see yourself in five years?

No matter where I am or what I'm doing, I will always find a role where I can be a steward of agriculture and U.S. farmers and ranchers. With the earth's population expected to grow to more than 9 billion in the next few decades, ensuring farmers have the tools they need to provide safe, sustainable, nutritious food has never been more critical.

What advice would you give to someone following your path?

Establish your brand early and always remain true to it. The people working for you and with you should know what you're about. My brand is I one where I am an advocate for always doing the right thing, even if it goes against conventional thinking.

To nominate someone to be featured in a future edition, please e-mail Keri Hayes (khayes@highquestgroup.com) with the subject line Women to Watch. Please provide your nominee's name, company name, title, contact info, and a quote that we can include in her profile that describes what qualities make her worthy of this designation.

Connections, Insight and Investment Opportunities in Global Agriculture



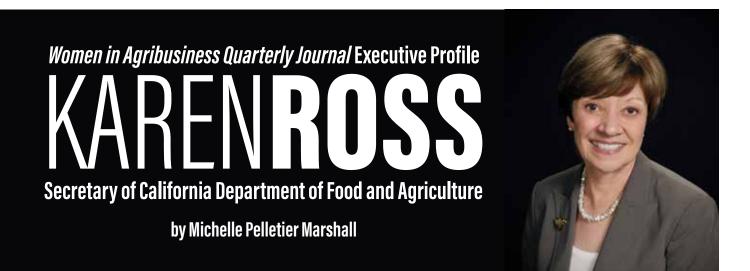
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As Secretary of the California Department of Food and Agriculture, Karen Ross oversees the state that leads the United States in cash farm receipts, totaling approximately \$45.3 billion in outputs in 2016. Over one-third of the nation's vegetables and two-thirds of its fruits and nuts are grown here, and some 400 commodities are produced. As the leading dairy-producing state in the country, California is responsible for nearly 20 percent of the nation's supply. In this state where one of the world's largest economies thrives, some 76,000 farms and ranches flourish over 25 million acres of land.

Ross, who was raised on a farm in her native Nebraska – part of which she and other family members still own, and her brother farms – has been secretary since 2011 when she was appointed by Governor Jerry Brown. Prior to that, she served as chief of staff to U.S. Secretary of Agriculture Tom Vilsack. Her background is rich in ag as she also represented the California Association of Winegrape Growers as president for 13 years, and before that was vice president of government affairs for the Agricultural Council of California, representing farmerowned cooperatives.

Ross's lifelong passion for serving in agriculture is exemplified by her drive in initiating programs that provide greater opportunities for farmers and ranchers to engage in sustainable environmental stewardship practices through water conservation, energy efficiency, nutrient management, and ecosystem services. She also is unwavering in her focus on core functions to protect and promote California agriculture in a time of significant budget reductions.

Women in Agribusiness caught up with Ross just after the new year to see what 2018 had in store for agriculture in California.

California has been battling many natural disasters - from years of drought to floods in the spring of 2017, and the recent unprecedented wildfires. How has this affected the agricultural economy of the state?

If you look at the past decade, our periods of drought have certainly had an impact. You cannot fallow over 500,000 acres in a year and not see some kind of impact to the agricultural economy.

With regard to 2017 – where it was apparent to all that we are living with climate change – the wildfires in Northern California and Butte County area primarily impacted grazing land. There will be some lingering effects for our cattle industry, and cattle and calves are the fifth most valuable crop in California. The wine country fires were extremely impactful because they occurred in an urban setting, and we lost complete neighborhoods of homes, but what we also saw was that the vineyards acted as a buffer – they were irrigated, the cover crops remained low, and though we lost a lot of infrastructure with regard to irrigation systems, trellising, and farm buildings and equipment, we think the crop itself was minimally impacted, as were destroyed vines. The issue of smoke taint was negligible due to how much of the crop had already been harvested. We also had moments of concern when dairy cows and poultry houses were in jeopardy, but our first responders were terrific and helped escort our farmers in so they could feed and water their animals.

The earlier fires in Orange County and San Diego County were fairly minimal as far as acreage, but one of our highest value crops is avocados and losing just 100 acres equates to a loss of over \$800,000. Some growers lost trees, but more significantly the wind and heat dropped the fruit on the ground so that it's not marketable. In Ventura County, we had more than 5,000 avocado trees or fruit lost, which will result in hundreds of millions of dollars in damage there.





Water use for agriculture has shown an impressive track record in California - using 5 percent less water with 96 percent more economic efficiency and a substantial increase in yield over the last 50 years. What are the leading contributor(s) to this noticeable improvement?

There are several contributors to the improvement. When I first moved to the state we were in a fiveyear drought. Everyone was shaking their fingers at the ag sector, urging them to move to higher yielding crops that use water more efficiently. At that time, we had over 1 million acres of cotton, and last year we had about 300,000 acres of cotton; and back then we had 250,000 acres of almonds and now we have close to 1 million acres. So farmers are making very rational economic decisions, responding to markets and moving to crops where they can put them on drip systems. Our crop patterns have shifted to those that require very high precision irrigation technologies, and in fact, all of our new vineyards and orchards are on micro-sprinklers or micro-drips. There has been much investment over the last 25 years in variable seed prompts, sensor technology, and weather monitoring stations to improve watering schedules. We started the Statewide Water Efficiency Enhancement Program in 2013 where we've been able to fund over 500 projects that help farmers convert to more efficient irrigation methods. The program also saves greenhouse gas emissions and energy. We estimate that over a 10-year period, we will save more than 120,000 acre feet of water and reduce greenhouse gas emissions by 167,000 tons. So we get multi-benefits from these types of investments.

This is a very popular program where we are oversubscribed by 300 percent every year when we offer funding. There's a real bottom line positive return on investment for farmers with this program, making the highest and best economic use of every drop of water.

Labor shortages have been a top concern, with the 2017 California Farm Bureau Federation survey finding that 55 percent of respondents had employee shortages. What role is the state taking to address this critical issue?

First of all, the state of California is most interested in making sure, through its laws, that the people who are here and employed don't become targeted for deportation. The labor shortage is acute and it's across so many commodities – it is driving the investment and acceleration of automation. It's pretty incredible what's available now, and what's being developed, especially for very delicate crops like strawberries, raspberries, and lettuce. Robotic weeders and mechanical harvesting play a role, but there will still be aspects of high value crops where hand labor cannot be replaced.

The most significant way for California agriculture to supplement its workforce is through the H-2A Visa Program for Agricultural Workers. Many of our larger farming organizations have invested a lot to make this program work for them, and in the last two years in California we have seen the number of H-2A workers increase to 14,000, where five years ago it was about 5,000.

We have a shortage of affordable housing in rural areas and for migrant workers, and have seen some growers make investments in apartments on their property, or even buy hotels for housing.





You've convened several consortiums of key agricultural and industry individuals to evaluate programs and assess potential impacts on California agriculture. What are some of these groups working on now?

Right now we are doing a deep dive with our pest programs because we have seen that with climate change our pest season is longer, and we are getting new species of pests, and in different areas than before. We have to make more investments to combat this.

The consortium that I'm most excited about is the one that I established in 2012 called the Specialty Crop Climate Change Consortium. We wanted to find out how farmers and ranchers plan and talk about climate change. We covered short-term adaptation and long-term mitigation strategies and the results have informed the programs that we now have under our Climate Smart Agriculture program. We convene the group every couple of years to update it because it is an excellent roadmap for the research community.

With California being the largest grower state and the most influential in ag technologies, what's the big picture look like for ag in 2018?

Connectivity is a significant issue. We are very hopeful that there will be continued investment in deploying broadband to enable comprehensive access to high-speed internet to allow us to actually deploy all the technology that farmers want to utilize.

The focus is on any automation that can help fill the gaping hole in our ag workforce, or any automation that improves precision in water management or managing fertilizers. There's also interest in technology that will help us understand how we can improve our soil health – such as how can we maximize soil carbon and accelerate the microbial activity to improve soil health and productivity?

There are exciting advances in technology to improve selective plant breeding to help us achieve drought, disease-resistant and heat-tolerant varieties. Western Growers has established an agtech innovation center in Salinas, which houses promising start-ups based on grower/packer priorities. This ensures that from the beginning the innovators can collaborate with the

end users so that the promising technology has a practical application that is supported by the field and packing house trials and data.

What do you say about the growing trend of food almost becoming a luxury item?

We all talk about farm to fork, but I want to make sure it's farm to every fork. The farm-to-fork movement is vulnerable to being an elitist trend. But there are still significant parts of our population where a bigger proportion of their paycheck is going to food because they are making less money. We need to make sure that healthy, nutritious, good, fresh food is available to all people, not just some – I feel passionately about that.

What's most important is that Americans value choice in the marketplace and that choice provides more options for farmers to stream products into organic, or conventional, or in a value-added product. This creation of market choices for the farmer is critically important for the overall economy of agriculture.

You have spent a life dedicated to agriculture and moving initiatives forward in the sector. Do you have any messages for women in agriculture?

I always seek out opportunities to meet with young people and college students to let them know that they are going to change the world. And when I look at our Future Farmers of America organization (FFA), our ag schools, our vet medicine schools in California, the growth in the number of women is impressive and exciting, and it's not going to slow down.

When I started in the ag sector 30 years ago, there were only one or two women who were professional advocates (lobbyists) for agriculture. Today, ag advocates are increasingly women. But while there are many more women in the room now, there's still a lot of progress to be made. I always encourage women to seek out appointments and to run for commodity board positions. Women bring another dimension to the discussion as communicators.

When I see young women, I strongly encourage them to seek out the sciences because I value science and I am an advocate for the field. Women

of science are making a huge difference, not only because they excel at science but that they are gifted at being able to communicate the complexity of it, and be relatable to consumers who are buying for entire families.

There are so many career opportunities for women and women of color in all the aspects of agriculture. We are very proud of our current FFA national president, who is from California and also is the first African American and female to head up the organization.

Every day I am humbled that I am a farm girl from western Nebraska – a very different place than California – and that I get to be a part of this incredible industry. I've had unbelievable opportunities here. California is a very special place. W

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WHY ARE YOU ON THE PAYROLL?



BY ORNA DRAWAS

YOU BETTER HAVE A PLAN

Dapper Danny Ocean, the lead character in the movie *Ocean's Eleven*, is a man with a very big plan. Less than 24 hours into his parole from a New Jersey penitentiary, the charismatic thief is already rolling out his next scheme. In one night, Danny and his ten-man crew of specialists steal over \$150 million from three Las Vegas casinos owned by a ruthless entrepreneur who happens to be dating Danny's ex-wife. The entire movie focuses on Danny's elaborate plot and orchestrating it to perfection – pulling off the most daring heist in the history of Las Vegas. It's not easy, requiring pick-pocketing, demolition, technological mastery, and daring acrobatics. But solid planning pays off as the team rides away with \$150 million. And if that wasn't enough, Danny even gets the girl. Amazing what a good strategy (and a nice Hollywood budget) will get you.

Most plans are not as elaborate, don't require such a diverse set of skills, and don't result in a \$150 million payout. But all successful ventures have a plan and all plans do require follow through. Danny Ocean had to have a strategy in place in order to pull off the heist, but he also knew that if any one of the "specialists" on his team did not follow through on their part, the ultimate goal would never happen.

How do you put a plan in place so it actually has a chance of success? Read on.

GET FOCUSED AND STAY FOCUSED

Plans get you focused. Period. They make up the pebbles that support your rocks. They lead you into action and move you towards the results you want. Your plan. . . your results; these are the key concepts. You must create your own; otherwise you will succumb to the demands and plans of others.

The first thing to understand about a good plan is that it must reflect your most important goals and objectives, which are then prioritized by timing, impact or value. Depending on your organization, your own job, and the specific needs of your team, your ultimate business goal may be a reflection of a variety of objectives:

- Sales growth and revenue expectations
- Customer requirements and needs
- Product innovation
- Competitive or economic pressures
- Market opportunities
- Government regulations
- ... Feel free to add to this list ...





This list may or may not help you. If you really don't know what to focus on, and you're not sure of your objectives, maybe the following questions will help. In his book, *Time Power*, Brian Tracy suggests you ask yourself these questions:

- Why am I on the payroll?
- What have I been hired to accomplish?
- What is my major goal or objective right now?
- What am I supposed to be doing at this moment?
- · What results have I been hired to achieve?
- Is what I am doing right now contributing to my most important goal?

WHAT DOES YOUR CEO WANT?

Ultimately, in order to be perceived as successful at work, you should be working on what your boss considers the most important tasks and projects.

When asked what specific qualities would help a young professional advance fastest in their career, over 80 percent of CEOs agreed on the top two qualities: (1) the ability to "separate the relevant from the irrelevant," that is, focus on those tasks that really matter to the company, and (2) the ability to "get the job done fast." Make it happen. Get it done. Take 100 percent responsibility for making things happen.

It's really all about figuring out the relevant over the irrelevant. When you can separate the two and get the job done efficiently, your career moves into the fast lane. When you are accomplishing your organization's highest priorities, trust me on this, you will be noticed.

Every day, as you decide what tasks to complete, what work to prioritize and what projects to delegate, consider your highest objective first, and then ensure your best energy is focused on those things that will support that objective. Spend most of your time working on the one goal that will make the greatest impact. In the end, you will have real results to show. And frankly, isn't that all that matters?

UNDERSTAND, NOT EVERYTHING IS A PRIORITY

Too often, too many things on our plate appear to be priorities. When asked to prioritize, I've actually had clients tell me, "everything is a priority." This is simply not so. To simplify the issue of prioritizing, remember that in business, it's usually all about the money. If what you are working on is either making money for your company or saving money for your company, it's important. Using this basic concept may help you prioritize your activities every day.

Of course, not everything you do directly makes or saves the company money, but many of your activities support these ultimate goals. Every company is built around either delivering a service or selling a product. Depending on your job within the organization, the activities you do help make it happen. You are judged and valued by your ability to influence these fundamental aspects of your company's business.

Go back and look at your major tasks. How close are they aligned to the core of your business? How far are you removed from the core fundamentals? The answer to this question is the key to your priorities. Never stray too far from the revenue line.

FINAL STORY: THE WOODPECKER

A woodpecker can tap twenty times on a thousand trees and get nowhere, but stay very busy. Or, he can tap twenty thousand times on one tree and get dinner.

Be sure to stay focused, otherwise, you will go hungry!

ORNA DRAWAS



As a speaker, trainer, and coach focused on achieving high priority goals, Orna Drawas trains business professionals to drive towards real and measurable results on a daily basis. The concepts of leadership and peak performance are highlighted in her book *PERFORM LIKE A ROCK STAR and Still Have Time for Lunch* which was on Amazon's list of Top 10 Books for Business Success. Orna has had over 30 years of business and management experience with IBM, Sprint and Time Warner Telecom. Now a leadership development consultant, Orna focuses on delivering unique programs that integrate hands-on workshops with personal coaching, accountability, and extraordinary results.





COLORADO

LEADING THE WAY IN AG INNOVATION



Sixty percent of the state's agricultural revenue is provided through the cattle and calf industry. Corn, wheat, hay, and dairy follow as top commodities.



Agriculture innovation is big in the state and Boulder and Denver have become hubs for tech startups.

Agriculture contributes more than \$40 billion to the state's economy each year and employs over 175,000 people.



Colorado (along with Washington state) started the cannabis revolution, when a 2012 amendment led to legalization in 2014 of medical cannabis and recreational drug use, as well as laws governing hemp.

The legal marijuana industry in Colorado brings in more than \$1 billion a year, with over \$135 million in tax and fee revenue brought into state coffers in 2015 alone.

The Colorado River helps to irrigate 3.5 million acres of farmland in the state.



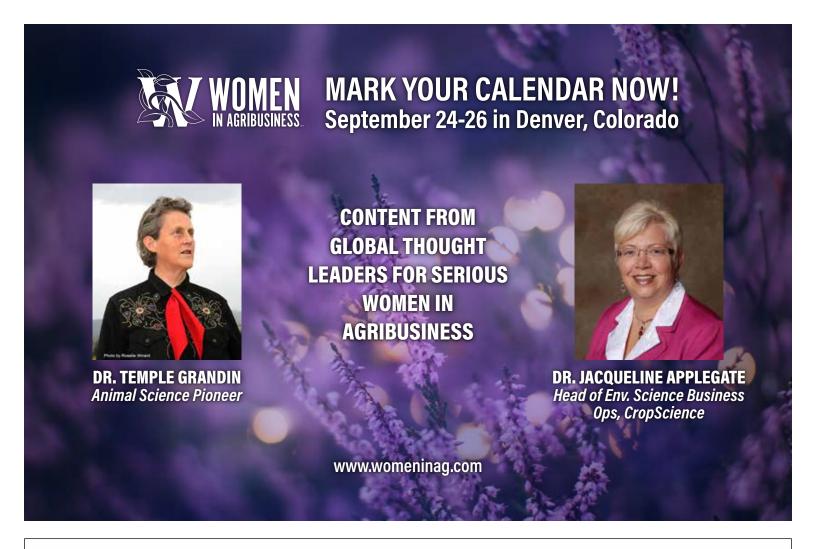
There are 36,700 farms in Colorado, covering some 31 million acres, which is nearly half the size of the state.



A publication of







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