



Your bridge2careers

for the Agriculture Industry

An Analysis of the Skills, Knowledge, and Abilities
Needed for a Comprehensive and Well-Qualified Talent Pipeline

AGRICULTURE INDUSTRY ROUNDTABLE FUNDERS

Many thanks to the forward-looking funders
who made this report possible!



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Executive Summary

The Agriculture Industry is one of the oldest and largest in Doña Ana County, and its future rides on the people, the talent, who will carry it through and into its next chapter. Innovation, “big thinking,” and mechanization are transforming the industry and are poised to grow the value-added side of the industry: carrying New Mexico True products from the ground to the grocery store, restaurant, school, senior center, and home.

The Agriculture Industry accounts for 4,830 jobs in the county and generates 12% of New Mexico’s \$3 billion in agriculture revenues. The county is home to 2,100 farms occupying 660,000 acres of land growing signature crops in chile and pecans, as well as cotton, onions, hay, corn, and seedless watermelons, alongside being home to several dairy farms and cattle ranches.

Growers and ranchers have always faced the challenge of weather conditions, but the mild climate of Southern New Mexico has traditionally been good for agriculture here. However, employers in this industry face numerous other challenges: increasing regulation, water shortages, unpredictable market forces, rising minimum wage rates, and (most important to the purposes of this report) an aging and disappearing workforce.

Some of the greatest workforce challenges lie at opposite ends of the “food” cycle: planting, growing, and harvesting on one end, capturing the value-added opportunities of production, distribution, and commercial sale on the other. Without a harvest, there is nothing for New Mexico to process, sell, or build support industries around, and therefore, no economic impact. At the same time, we’re missing out on economic impact by allowing New Mexico-grown produce and livestock to be processed and commercialized out of state.

However, of any county in the state, Doña Ana is possibly best positioned to address and solve both the workforce conundrum and capture dramatically expanded opportunities of this industry. It has unequalled strengths from the educational institutions that call the county home, as well as workforce and economic development programs ready to identify talent who will embrace an industry so vital to the core needs of any society: food.

As a result of the survey and conversations held with eight Southern New Mexico employers, several key challenges were identified that must be addressed for agriculture to continue to thrive in Doña Ana County:

- Negative stereotypes and narratives about careers in Agriculture leading to exporting potential talent to other states
- Unlike generations past, younger people are not being attracted to the industry, uninformed about the enormous opportunity it represents
- Technology and mechanization are transforming the industry, but not at a rapid enough rate to replace the people needed for critical roles
- The role of foreign labor and wavering federal policies around immigration.

- Misalignment between the county's educators and the needs of this industry locally
- Complete absence of the Workforce Connections system in working with employers in this industry

Building the “Bridge” from Education to Opportunity in Doña Ana County’s Agriculture Industry

INTRODUCTION

The heart of Doña Ana County is the agriculturally rich Mesilla Valley, fed by the Rio Grande River, where rows of pecans, red and green chile, cotton, and other signature crops have been farmed for generations, despite growing concerns about water shortages. Dairies and ranches raise cattle and struggle through the ups and downs of meat and dairy prices to keep their operations going.

Doña Ana County is the most diverse agricultural area in the state, ranking first in crop value. It is the top producer in the world for pecans, grows 30% of all US chile, and is second in the state for vegetable production. It also ranks nationally in:

- Top yield-per-acre in pecans
- Top 2% for milk production and top production per cow in the nation
- Top 5% nationally for sales in dairy, pecans, vegetables, melons, hay, and alfalfa
- Top 5% nationally for livestock inventory

The Agriculture Industry is one of the oldest and largest in Doña Ana County, and its future rides on the people, the talent, who will carry it through and into its next chapter. Innovation, “big thinking,” and mechanization are transforming the industry and are poised to grow the value-added side of the industry: carrying New Mexico True products from the ground to the grocery store, restaurant, school, senior center and where ever consumers are found.

The Ag industry accounts for 4,830 jobs in the county, according to the 2019 Economic Base of Doña Ana County report published by the Arrowhead Center at New Mexico State University. It generates 12% of New Mexico’s \$3 billion in agriculture revenues, coming in at \$370 million in products sold from the county’s 2,100 farms on 659,000 acres of land. It generated \$4.8 million in gross receipts during the first quarter of 2021.

The Mesilla Valley grows signature crops in chile and pecans, as well as cotton, onions, hay, corn, and seedless watermelons, alongside being home to several dairy farms and cattle ranches. There are value-added enterprises that work in the production and distribution of the county’s products. One of the largest is Stampede Meats – a meat processing facility in Santa Teresa, employing 650 people.

Growers and ranchers in the county face numerous challenges to sustaining their operations in New Mexico: increasing regulation, the risk of water shortages, unpredictable market forces, rising minimum wage rates, and (most important to the purposes of this report) an aging and disappearing workforce.

Some of the greatest workforce challenges lie at opposite ends of the “food” cycle: planting, growing, and harvesting on one end, capturing the value-added opportunities of production, distribution, and commercial sale on the other. Without a harvest, there is nothing for New Mexico to process, sell, or build support industries around, and therefore, no economic impact. At the same time, we’re missing out on economic impact by allowing New Mexico-grown produce and livestock to be processed and commercialized out of state.

In order to gain a clear understanding of the holistic talent needs of these employers, The Bridge of Southern New Mexico, in partnership with the Greater Las Cruces Chamber of Commerce, convened representatives of these employers to participate in an Industry Roundtable with two goals:

- Quantify the complex challenges of their workforce today and tomorrow
- Explore innovative approaches to meeting those needs with local talent development assets, including K-12 districts, Doña Ana Community College, New Mexico State University, and the Workforce Connections system.

Participants in the Roundtable include:

- New Mexico Secretary of Agriculture Jeff Witte (chair)
- David Salopek, David Salopek Farms, LLC
- Dino Cervantes, CEI
- Greg Carrasco, Farm Credit Services of New Mexico
- Savannah Gillis Turner, Gillis Farms and Desert Springs Produce
- Don Hartman, Hartman Farms, LLC
- Buddy Achen, AAA Farms

Leveraging elements of the U.S. Chamber of Commerce’s Talent Pipeline Management approach and the license for a survey tool shared with New Mexico State University, The Bridge conducted a survey of the Roundtable members and then distilled the data to create actionable intelligence.

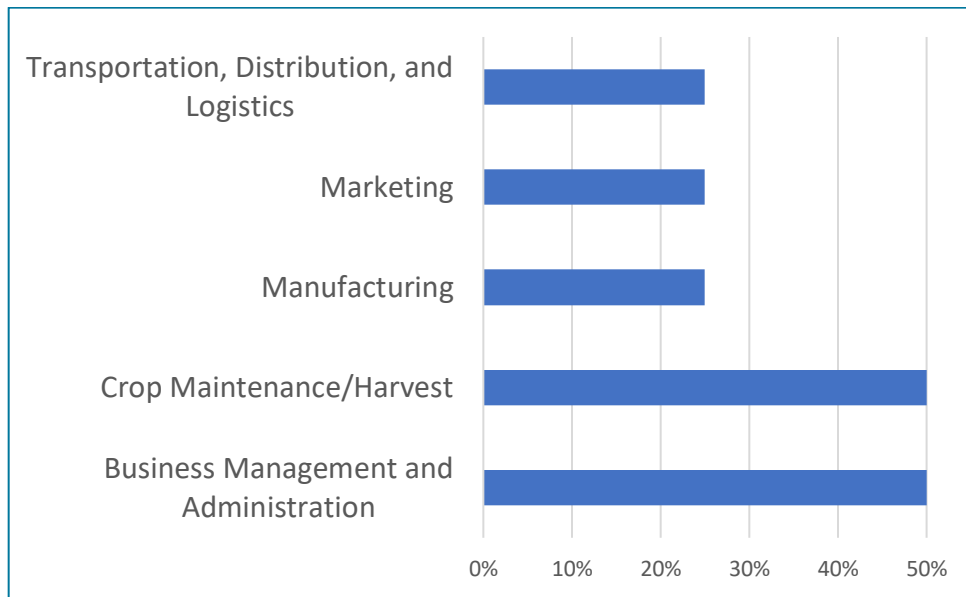
What follows is a summary of the findings. Key challenges have surfaced that require further exploration and innovation to address:

- Negative stereotypes and narratives about careers in Agriculture leading to exporting potential talent to other states
- Unlike generations past, younger people are not being attracted to the industry, uninformed about the enormous opportunity it represents
- Technology and mechanization are transforming the industry, but not at a rapid enough rate to replace the people needed for critical roles
- The role of foreign labor and wavering federal policies around immigration.
- Misalignment between the county’s educators and the needs of this industry locally
- Complete absence of the Workforce Connections system in working with employers in this industry

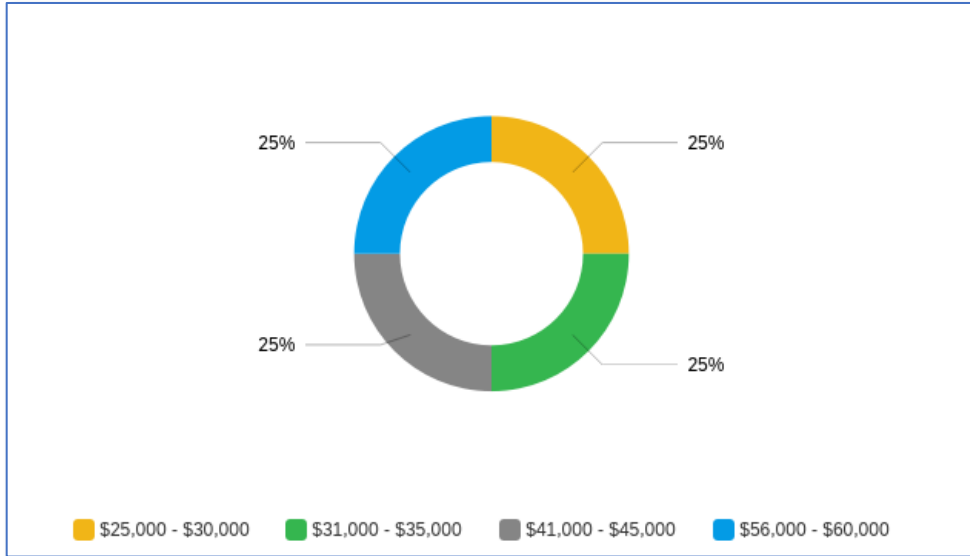
ABOUT THE EMPLOYERS AND THEIR JOBS

Of the Roundtable members, four completed the survey and three others verbal offered input into the survey. Of the four surveyed, they reported a total of 93 employees and bringing in 63 new hires each year, 100% of which are replacement employees. However, they only reported receiving half the number of applications as people needed.

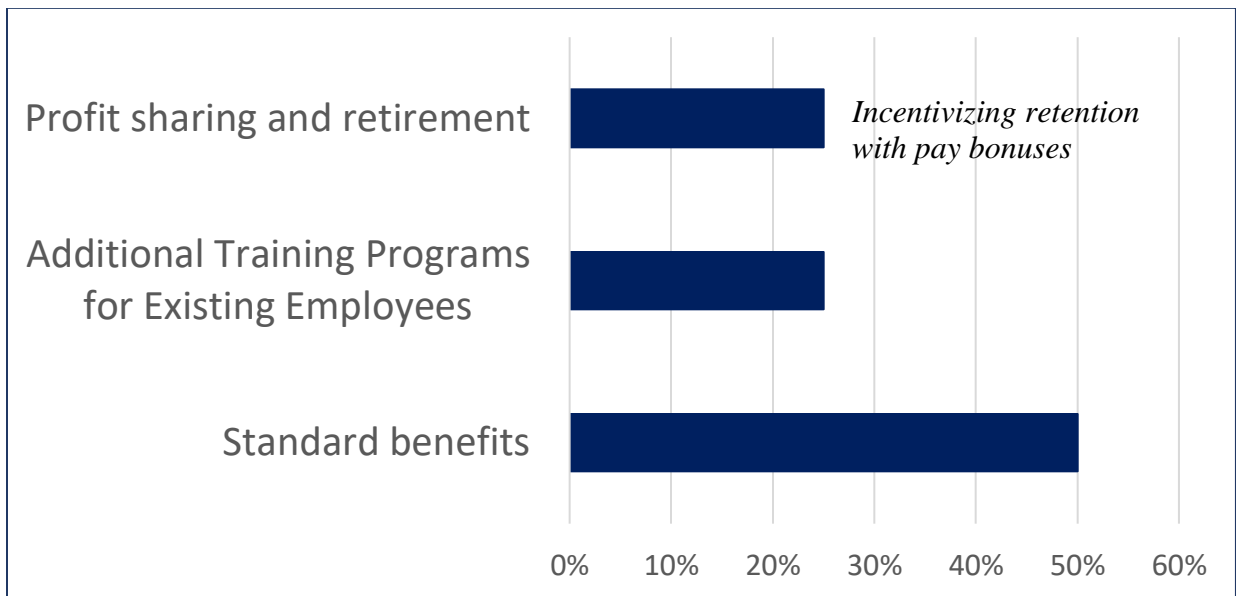
The workforce of the Agriculture sector comprises a broad set of career fields:



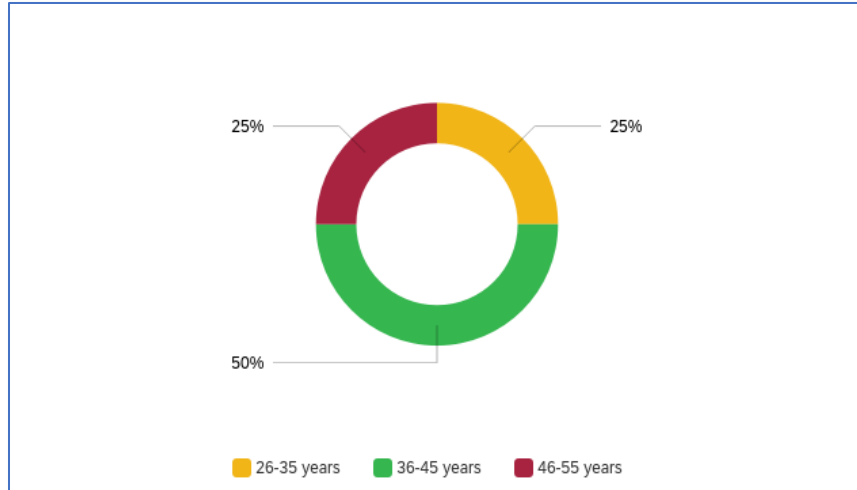
Depending upon the work, pay scales in this industry offer wages both above and below the county's median household income of \$40,973.



The companies offer a varying level of family-supporting benefits:



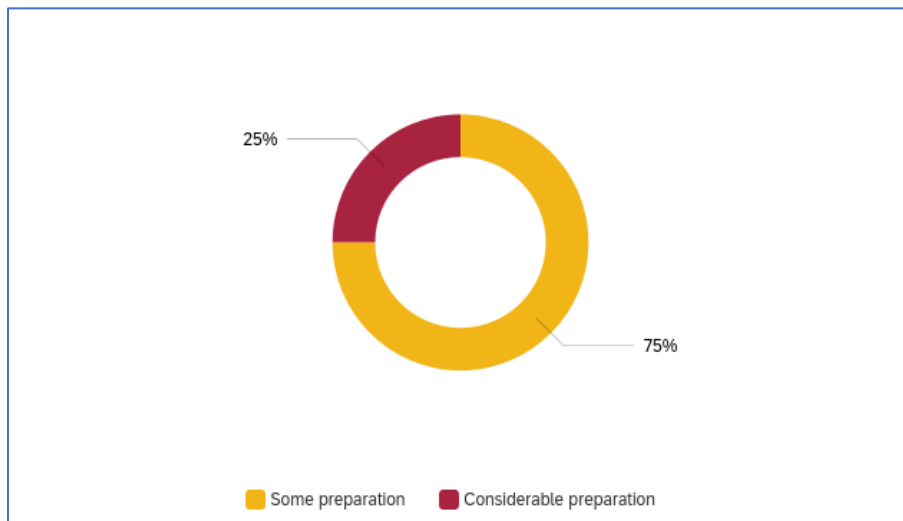
One of the distinctives of this industry is the age of new employees trends higher than other target industries here, with the exception of Aerospace/Defense:



Opportunities are offered to attract younger workers into the industry through both job shadowing and internships. One respondent said:

“I often prefer new hires with no or little experience, so that I can train them to my standards, and I don’t have to break any bad habits learned elsewhere.”

The Agriculture Industry does seek a well-qualified workforce, but also acknowledges that any new talent will require training in areas of specialty. As a group, they seek, at minimum, some level of preparation:



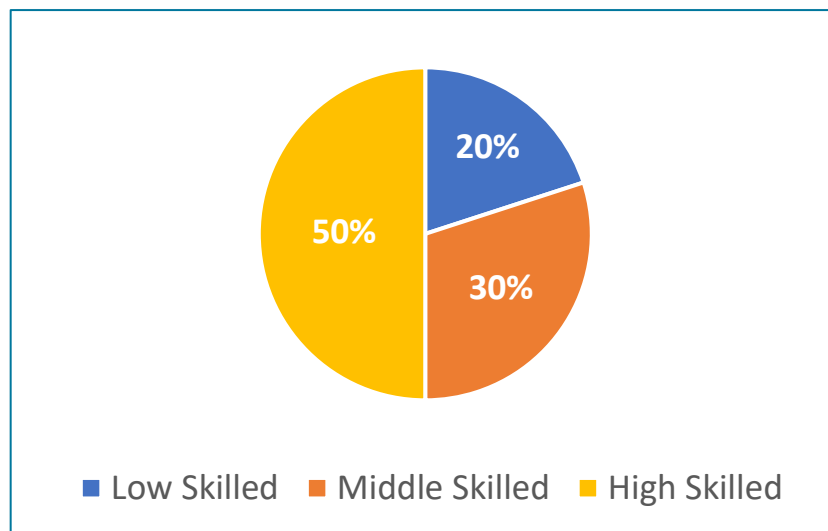
“We’ve not done a good job of highlighting the advancements in the adoption of technology,” said Secretary Jeff Witte. *“A farmer in Lubbock took video of what takes place inside the cabin of a tractor, with GPS and computer skills, and advertised for a computer operator. He had 30 applicants, and it turns out they love the work.”*

Dino Cervantes, who is both a grower and manufacturer, stressed the importance of the “soft” or employability skills of incoming talent.

“If they have job experience and have stayed on a job for a period of time, that’s good. We can train them in the specifics, whether that’s in maintenance, tractor driver, or lab technician.”

Greg Carrasco, on the financial side of the industry, said they offer significant on-the-job training, despite the fact that they are hiring most candidates with a master’s degree.

The skill levels within the industry breakdown based on levels of skills:



In speaking of the need for high skills in this industry, Secretary Witte said, *“There are transitioning skill sets in agriculture. Precision agriculture and mechanization require a different set of skills.”*

Don Hartman spoke to the basic skills:

“I can teach a worker whatever he needs to learn, but what most people don’t have is self motivation. It’s the work ethic that is lacking.”

“The cost of labor and the associated liability is driving us to technology,” said Cervantes. *“The cost of labor is going up 12%. It drives us to look at other options: moving to Texas where labor is cheaper, mechanization, and reacting to market pressures. There is also not a lot of training out there for some of the skills we need, like mechanics for John Deere tractors.”*

Half of the employers reported using the H1-B Visa or Migrant Farmworker Program to help with their workforce, but usage of the program is difficult.

“Housing is a big deal. We must provide housing for H1-B workers, as well as cover other expenses. In our community, all affordable housing is taken already by others who qualify.”

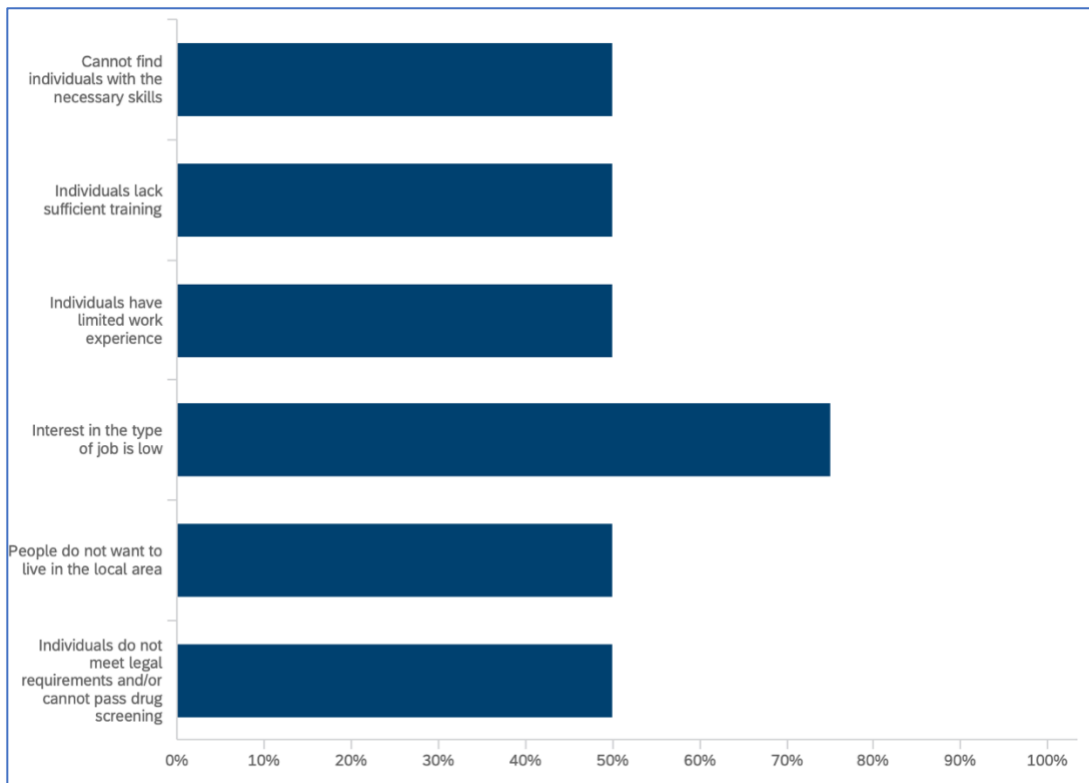
“I need workers year-round. I can’t afford to not have them here for three months.”

“We need legal avenues to get permanent workers and have them contribute to social security and pay taxes. We lose institutional knowledge when people leave.”

The hardest-to-fill jobs participants identified were:

- General Laborer
- Equipment Operator
- Computer Operator
- Appraiser
- Credit Analyst
- Loan/Document Processor
- Warehouse/Forklift
- Accounting

All of the employers indicated struggling to receive applications from interested individuals and struggle to fill positions for a host of reasons:



“Other states do a really good job of celebrating the Agriculture Industry, and their education systems understand the importance of agriculture to the state,” said Cervantes. “We (New Mexico) have demonized agriculture work. It’s a generational challenge – manual labor is viewed negatively. Enrollment in agriculture programs is decreasing, and legislative policies are damaging the industry.”

Hartman said, *“Our (Future Farmers of America) kids are really bright, and they go somewhere else...most of them go to Texas. Labor and state regulations and anti-friendly agriculture policy pushes kids out of state.”*

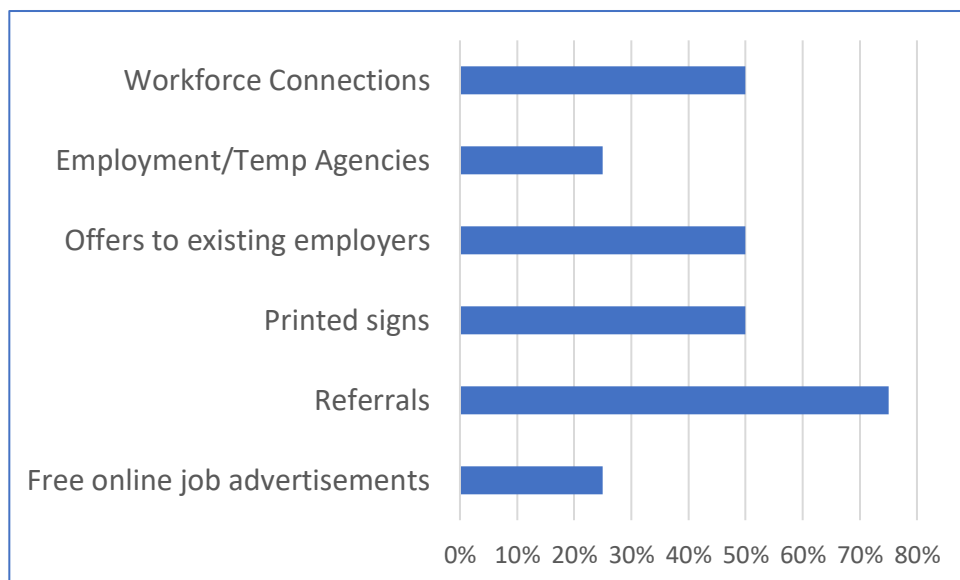
Cervantes talked about the shift underway in Doña Ana County to replace “row” crops (cotton, chile, etc.) with pecans, because the cost of labor is two to three times higher for “row” crops.

Policymakers have an important role to play in supporting the industry, and the more they can understand the needs of growers who have large acreage, the better their policy can be.

“We farm large acreage and try to make a living at it,” said Cervantes. “But those who are making agriculture policy are from Albuquerque and Santa Fe and are more experienced with ½ acre, high-cost organic crops. That is completely different.”

Secretary Witte said, *“Our ag community is disengaged directly from the legislative process. They need to have direct relationships with legislators and not just rely on the work of the Farm Bureau.”*

More needs to be done to assist these employers in attracting their workforce. Current methods of attraction include:



If Doña Ana County is to continue to be a leader and contributor in the Agriculture Industry, our talent development continuum must come alongside employers to meaningfully address these challenges. Having the staff for harvesting is just one piece of a larger challenge around talent in which new young thinkers aren't coming into the industry at the same time institutional knowledge is leaving with nothing to take its place.

The state has a responsibility to maintain its agriculture industry by exploring innovative solutions for growing the new generation of farmers and ranchers, just as critical to the state's ecosystem as growing nurses and educators. If the state loses its ability to grow and exports its produce and livestock, loses those willing to carry on the state's rich tradition of farming and ranching, and fails to cast a vision for young people's future in this industry, the economic and opportunity loss will be devastating, especially when paired with the losses caused by COVID in the top three private industry sectors: Food Service and Accommodation, Retail Trade, and Healthcare and Social Assistance.

THE SKILLS, KNOWLEDGE, AND ABILITIES NEEDED FOR SUCCESS

Using the responses of our Roundtable members, following are a set of non-negotiable skills employers need from their incoming talent in four specific areas:

AT-A-GLANCE ELEGIBILITY REQUIREMENTS

Agriculture Industry

Based on 75%-100% of employers' responses, here is a comprehensive picture of what New Mexico's True Talent needs to know, and be able to demonstrate, in order to enter the Agriculture Industry.

Math:

- Adding and Subtracting
- Multiplying and Dividing
- Using fractions, decimals, and percentages
- Taking or interpreting measurements

Reading, Writing, and Language:

- Reading at a reasonable speed
- Applying information that is read
- Producing clear writing
- Correct spelling and grammar in writing and speaking
- Identifying main points from written content
- Assessing credibility of written content
- Editing self-written content
- Writing about a topic using supporting facts

Employability:

- Communicating
- Enthusiasm and Attitude
- Problem Solving & Critical Thinking
- Self-Management
- Interpersonal Skills
- Initiative
- Professionalism
- Teamwork
- Cultural Competence

Digital Literacy:

- Using digital resources to learn new skills



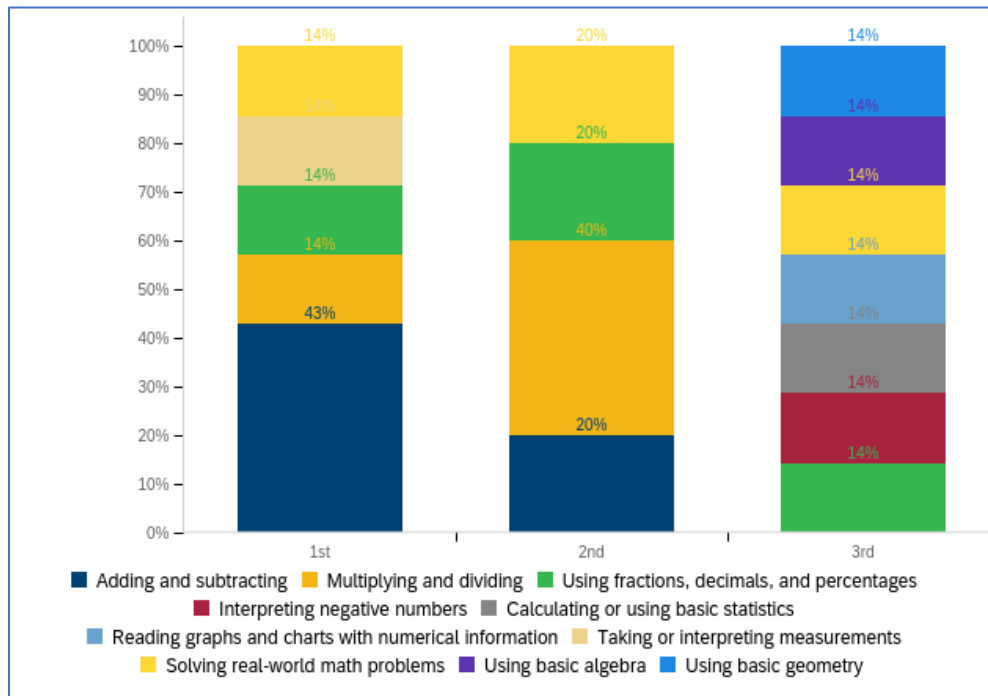
In each of the five skill sets, employers identified both required skills to do the job and how many candidates (“Most,” “Some,” and “None”) seem to be equipped with those skills. It is notable that no employers chose “Most” in any of the five skill categories. But, there was alignment between “Some” and required skills in Math, Technology, and Digital Literacy skills. However, significant skill gaps were identified in Reading, Writing, and Language Skills and Employability Skills. (For a full reporting of the gaps by skill category, please see the Appendix.)

The most significant gaps were in:

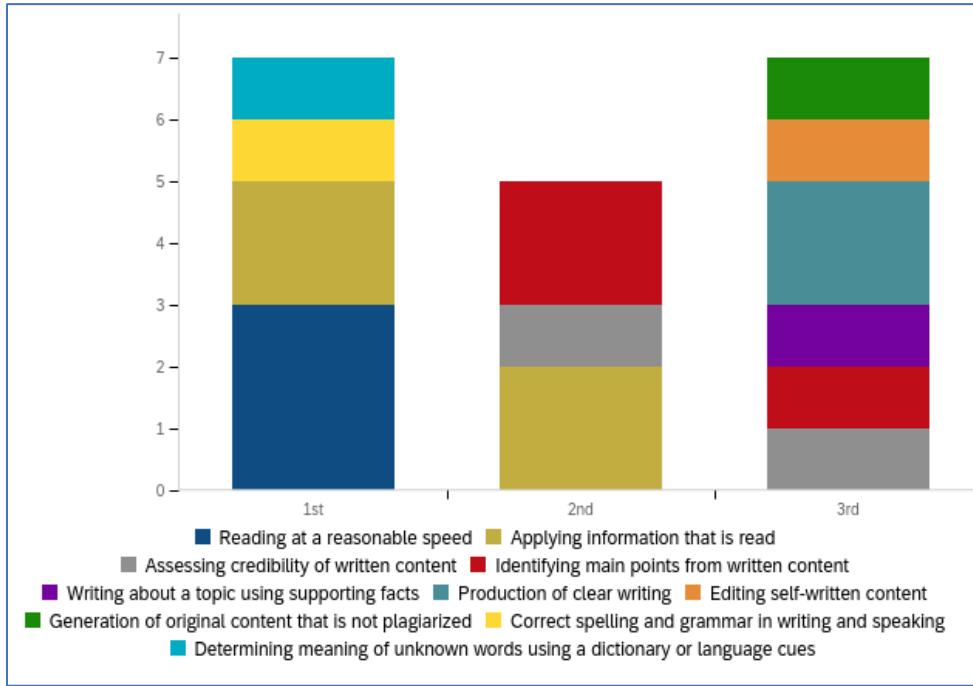
- Production of clear writing
- Identifying main points from written content
- Communication
- Enthusiasm and attitude
- Problem solving and critical thinking
- Professionalism
- Teamwork
- Cultural competence
- Initiative
- Interpersonal skills
- Self-management

For each of the categories, Roundtable participants identified the top three skills necessary for success in their jobs.

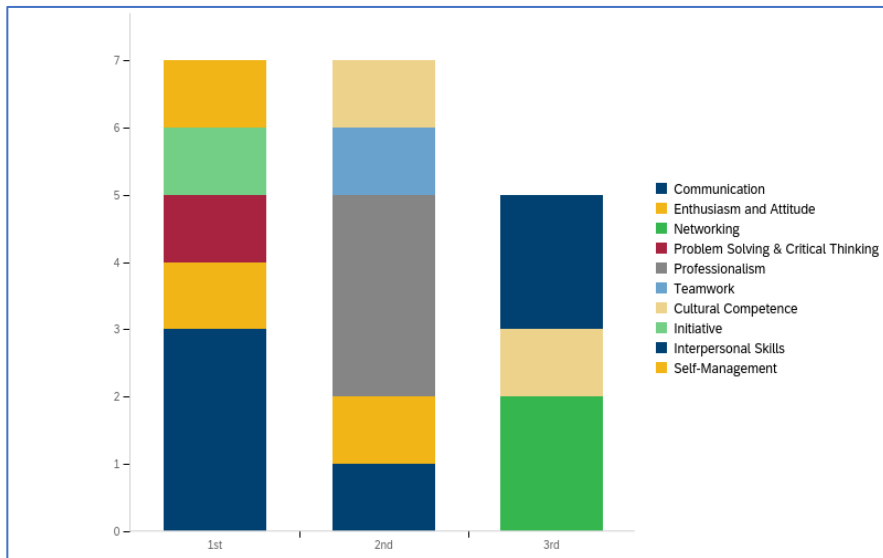
Math Skills



Reading, Writing, and Language Skills



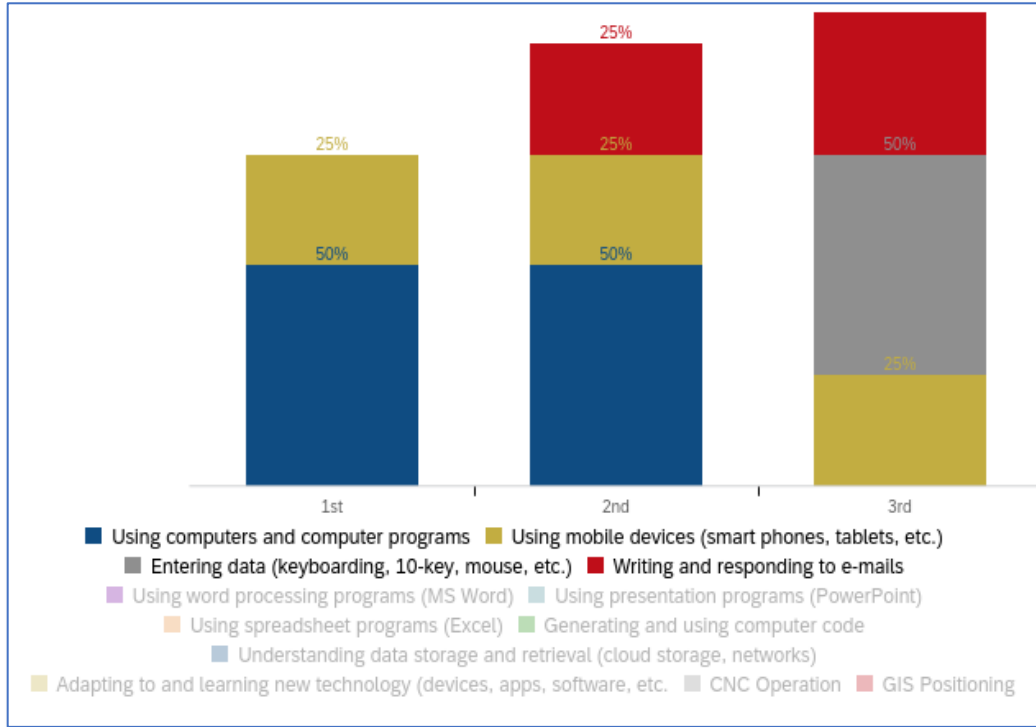
Employability Skills



Witte said, “When we look at people to bring into the department, we look to see if they are active in the community. Were they leaders? Can they get things done, not just make good grades?”

With Farm Bureau, Carrasco said, “We have a formalized set of tests and personality profiles to assess soft skills and try to figure out if they have the soft skills to bring into a job.”

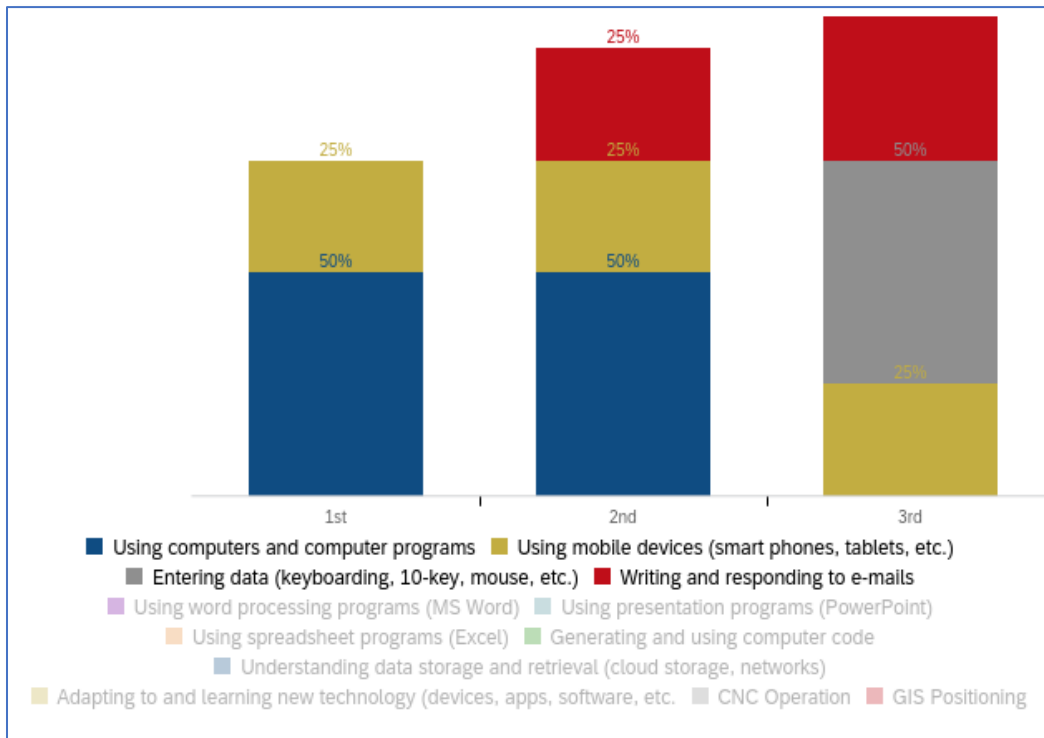
Technology Skills



Computers and mobile technologies are growing quickly in use across the industry.

“We have all things on a drip irrigation system, so if we need someone to go to the computer or reprogram it, they need to know how to do that,” said Hartman. “Also, our tractors are GPS guided, and the settings change from one farm to another.”

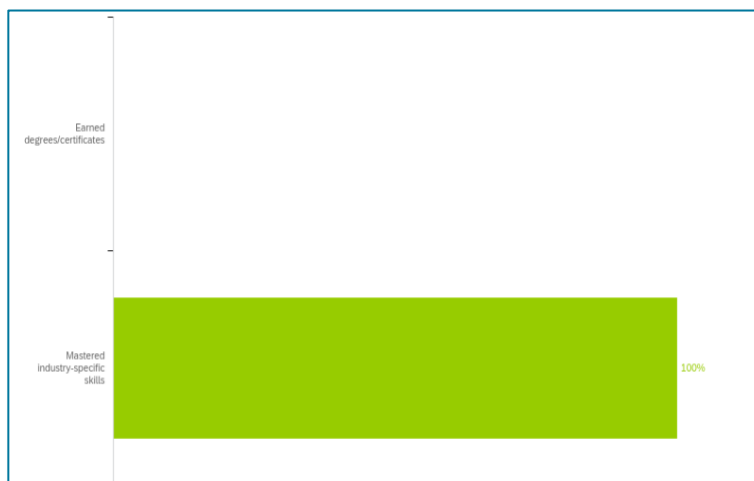
Digital Literacy



In considering the future skills, knowledge, and abilities that will be needed, one survey participant said digital applications involving risk assessment will be important skills for future workers.

DEGREES, SKILLS, AND EXPERIENCE

Fully 100% of the Roundtable members view mastery of industry-specific skills as the greatest contributing factor to future job success.



That said, degrees have value for some positions, but experience, including transferrable skills from other industries, can open jobs for those without credentials. One respondent said:

“Degree will allow you to be hired - mastering industry specific skills is required for successful job performance.”

Roundtable members were able to identify what the top credentials and degrees were in each of four categories, as well as jobs for those without credentials.

Most Requested Four-Year Degrees:

- Agricultural Business/Economics
- Accounting (x2)
- Food Science
- Finance

Most Requested Two-Year Degrees:

- Maintenance/Welding
- Accounting

Most Requested Trade or Certificate-Level Credentials:

- Forklift Driving
- Warehouse
- Truck Driving (CDL)

Top Jobs for Those with High School Diploma or GED:

- Equipment Operator
- Receptionist
- Maintenance

Top Jobs for Those without Credentials:

- Laborer
- Equipment Operator
- Receptionist

Other comments from the survey reflected the balance between experience and education:

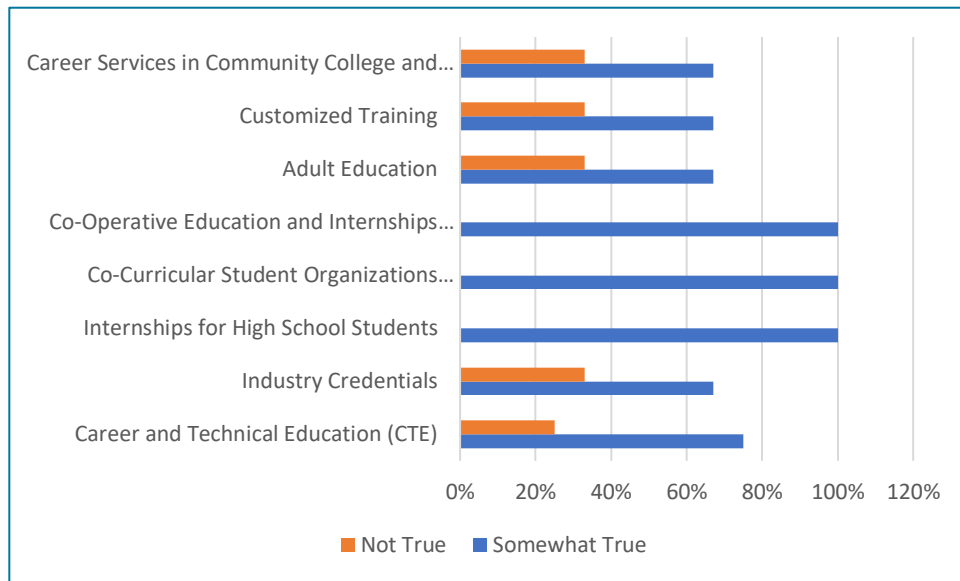
“For other jobs, credentials are a threshold. For example, ‘Appraisers must have either completed or will need to complete appraisal training to meet certification requirements.’”

“There may be some specific jobs (i.e. IT staff) that the earned degree/certificate may be more important, as the industry specific skills are less differentiated than in other industries.”

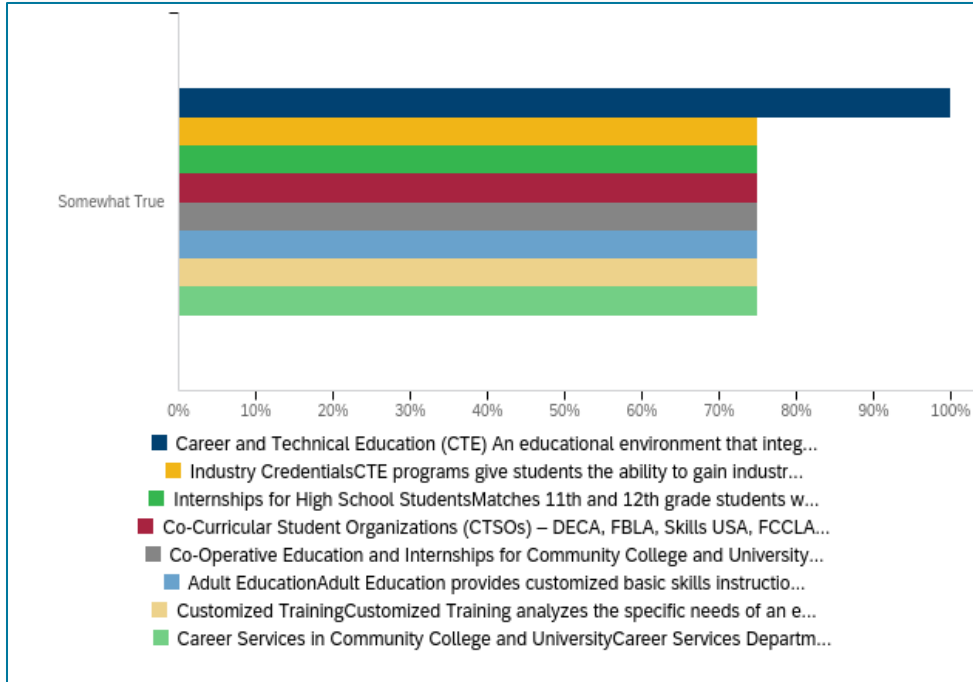
AWARENESS OF EDUCATION AND WORKFORCE PROGRAMS FOR THE INDUSTRY

Agriculture education is one of the longest sustaining programs in the region. The K-12 system has been a part of programs like 4-H and the Future Farmers of America for decades. Additionally, New Mexico State University was founded as New Mexico College of Agriculture and Mechanic Arts and has a robust history in agriculture education and research. Interestingly, Doña Ana Community College has no formal agriculture program, which may explain some of the misalignment and technical skills gaps in the education to employment pipeline. However, together, these entities all have a role to play in meeting the workforce challenges of the industry in partnership with employers.

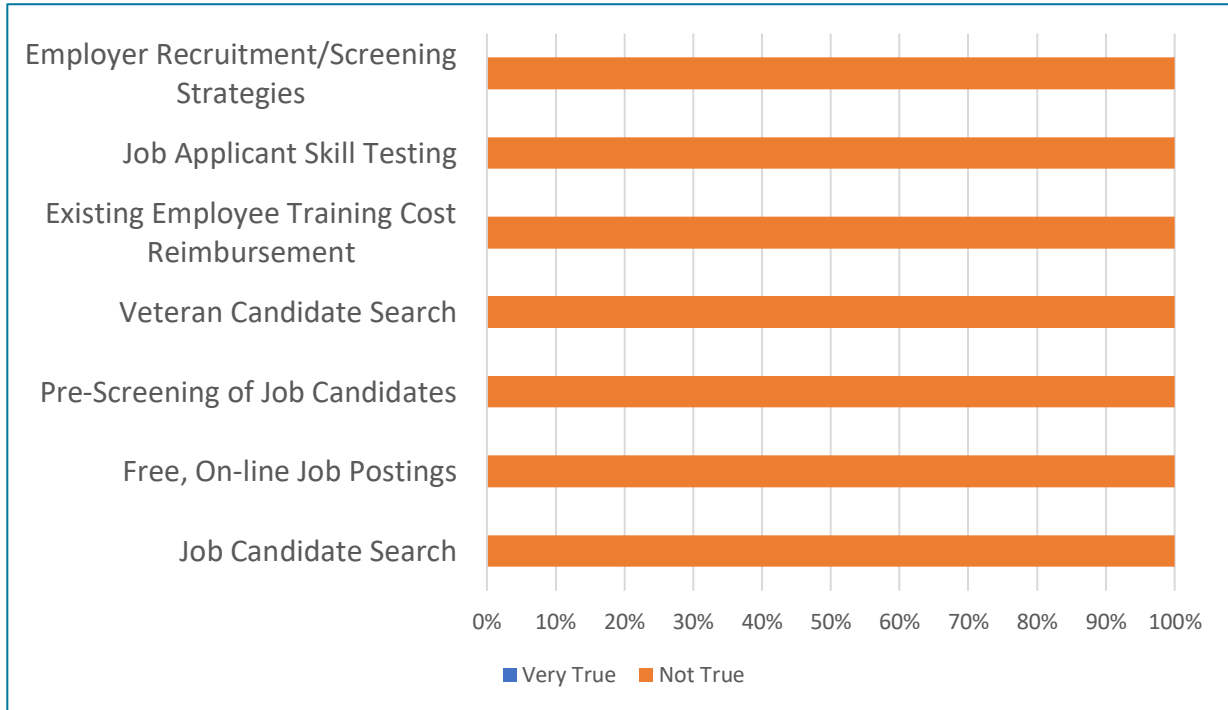
Roundtable participants are generally aware of most the K-12 and post-secondary programs that can assist them in growing their workforce:



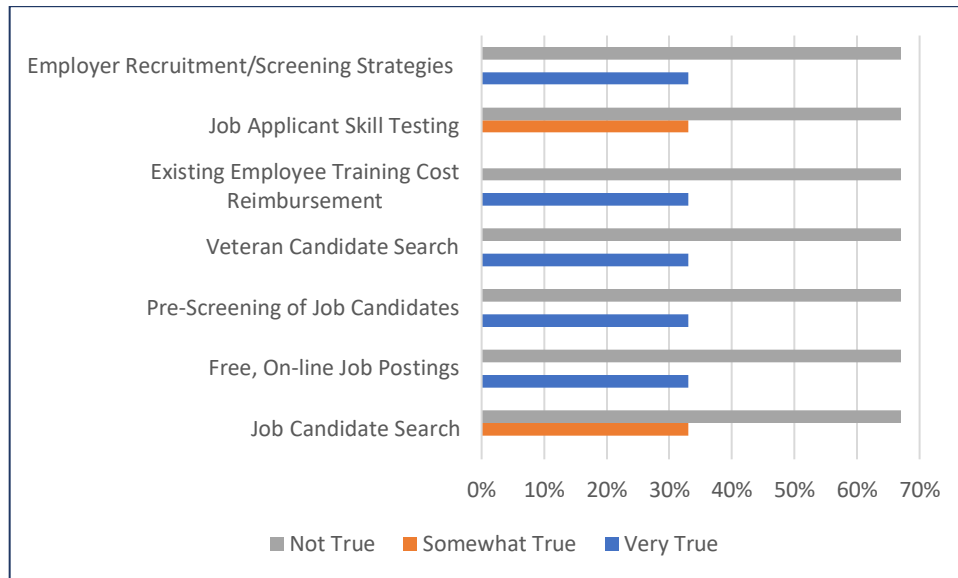
And when asked if they see them as beneficial, they all agreed to the choice of “Somewhat True”:



On the other hand, these employers are completely disconnected from the Workforce Connections system that may well have the talent they need:



A few employers are open to Workforce Connections playing a more proactive role in helping them with their workforce challenges:



One of the respondents to the survey made this observation about how to strengthen the relationships with Workforce Connections providers:

“I feel like Workforce Solutions are not about helping business. They aren't in tune with many of the needs that the business community has. I pay loyal employees very well for our particular field of work. We provide vehicles, fuel cards, profit sharing, and retirement.”

KEY OPPORTUNITIES FOR PARTNERSHIP AND INNOVATION

For the Agriculture Industry of Doña Ana County to continue to thrive, elevating employment opportunities and deepening labor pools is critical. This industry, more than others, suffers from a dwindling pipeline of talent driven by several factors, all of which could be addressed by the partners in the talent development continuum working together:

- Replicate successful efforts in other states that elevate the value of the Agriculture Industry and careers in the field
- Replicate collaborative models of success from within the Agriculture Industry that created more opportunity for employment and economic impact.
- Stronger partnership with the Workforce Connections providers, including:
 - Increasing focus on youth employment opportunities
 - Deploying apprenticeships for the technical careers
 - Building relationships with employers to identify key opportunities for current job seekers

- Expanding community-wide collaborations to meet the needs of migrant farmworkers during the off-season
- Increased work-based learning opportunities for students in related CTE programs and Career and Technical Student Organizations
- Engaging the leadership of New Mexico State University’s College of Agriculture, Consumer, and Environmental Science, through the Center of Excellence, on expanding their efforts to fortify the Agriculture Industry of New Mexico
- Legislative Support for Building the Agriculture Industry workforce

Elevating the Value of the Agriculture Industry to the Local and State Economy:

Removing negative stereotypes around employment in agriculture and elevating the potential for robust careers at the cutting-edge of ag will require a coordinated, multi-faceted communications effort to build visibility for these careers and attract workers into this industry.

The effort should bring local economic development entities, the NM Department of Agriculture, the Cooperative Extension Service, NMSU’s Center of Excellence on Agriculture, and CTE programs in the three districts into partnership on development and deployment of the campaign to youth and young adult audiences, as well as speak to legislators statewide to inform policy related to growing and sustaining the industry.

Promoting the Agriculture Industry at the state level is critical, especially because it’s been called out by Gov. Michelle Lujan-Grisham’s administration as one of ten economic development targets vital to the diversification of the state’s economy. Economic Development investments have targeted expanding opportunities for new greenhouse growers, which did benefit local growers Wholesome Valley Farms in Berino and Rich Global Hemp.

Secretary Witte said, “We know that people are interested in farming, right now focused on being hemp farmers. But that’s just one market...we can attract them into new or existing markets like chile. We can highlight the value of computer skills needed to run tractors and crop systems. We can raise up the next generation of successful ag producers.”

Replicate Effective Collaborative Models

New Mexico is home to the largest cheese plant in the country in Clovis. That resulted from the co-op model employed by the dairy industry in which individual dairy farmers work together to provide more milk than they could as individuals.

“I have conversations with people from outside the state that see big opportunities for New Mexico’s Ag Industry,” said Secretary Witte. “We need big thinkers...people who see these opportunities. Who understand the whole of industry from the rancher to the meat processor to retail. We need to find ways for farmers to work together, like the dairy co-op model, in order to create a year-round supply of produce or cattle.”

Additionally, larger solutions lie not just in the county and state, but in the larger Borderplex region. According to Davin Lopez, president of the Mesilla Valley Economic Development Alliance, we are missing the opportunities to launch value-added companies here to process some of the produce coming out of Chihuahua, Mexico, like pistachios, apples, cherries, oregano, and nuts, in addition to cotton.

“Mexico is working to penetrate the US market,” Lopez said. “I think there is a general lack of awareness of the upward end of the supply and distribution chain that many people here aren’t aware of. We don’t present those opportunities in an attractive way.”

Stronger Partnerships with Workforce Connections:

As of this writing, Doña Ana County has nearly 9,000 receiving unemployment benefits, some of whom with skill sets of value to this industry. Those who are eager to be reemployed and have the prospect of earning a sustaining wage could find opportunities with these employers who are clearly willing to provide training on specific skills to new hires who come with the soft skills so valued by these employers.

A collaboration between the One-Stop Operator, the Business Services Team, the Adult and Dislocated Worker Provider, and Youth Provider can strategically align job placements, on-the-job training, incumbent worker supports, and youth placements in internships, apprenticeships, and job placements to support the industry.

Working with employers on increased efforts to promote employee retention and building skills to take on supervisory or leadership roles could help reduce the turnover experienced by the industry and grow the depth of the talent, as well as pair prospective candidates with careers that provide both wages and benefits. The Business Services Teams of the newly established office in the southern part of Doña Ana County, those working with Luna County, and those from the Truth or Consequences office each have a role to play in building relationships with these key employers.

Recruiting these employers will require a better understanding of the financial benefits of hiring through the WIOA system, as well as the supports for screening and preparing potential candidates and upskilling existing workers.

Work-Based Learning:

Doña Ana County is uniquely equipped to address the workforce challenges of the Agriculture Industry through its education partners. Career and Technical Education pathways in the Skilled Trades with agriculture applications were prioritized as part of the \$1.1 million investment of Federal CTE funds in the county’s three school districts and Doña Ana Community College.

One of the strongest high school programs in CTE is Career Student Technical Organization (CTSO) Future Farmers of America. Students in FFA often come from farming and ranching families, demonstrate strong leadership skills, and have long been engaged in the industry

through 4-H. Linking those programs more closely to the NMDA's Agricultural Workforce Development Program will support a stronger return on investment for this taxpayer-funded program and encourage New Mexico's students to remain in the state to pursue careers or start their own businesses in agriculture.

In the program, students in high school, college, and adult education can earn minimum wage and work at least 130 hours, but not more than one year. Related internships can be in, but are not limited to: agribusiness, animal husbandry, crop production, farm management, agronomy, natural resources, forestry, research and development, marketing and sales, food safety, and/or maintenance and repair of machinery and equipment.

NMSU Center of Excellence:

New Mexico State University was designated by Gov. Michelle Lujan-Grisham as a Center of Excellence for Sustainable Agriculture. If workforce is key to sustainability, then NMSU has a significant role to play in elevating careers, providing co-operative and internship opportunities, and identifying new resources for growers from planting, growing, and harvesting through to production and distribution. Currently, students graduating from NMSU in the Agriculture programs are being prepared for jobs that are not here. (Please see Appendix C and D.) Greater alignment between local needs and local programs is critical to the workforce talent pipeline.

Mechanization's impact on crop production is especially important, as the county faces the loss of row crops, specifically, as the supply of labor goes down and the cost of labor goes up.

There may be a role for the ACES College to work with Doña Ana Community College to identify prospective programs and candidates that would support missing pieces in the talent pipeline for the industry. At this time, DACC has no agriculture-specific programming, though some of its programs do have relevance to the industry tangentially.

NMSU can also lead in addressing the need for more value-added agriculture businesses and jobs – changing the products grown here into packaged, marketed, consumable products that have greater value in the marketplace.

Lopez said, "To bring entrepreneurs and others from the business community to work in collaboration with Aggie Research would support commercialization of the innovation work taking place there."

One important entity playing this role now is the Arrowhead Center at NMSU. Arrowhead currently hosts Ag Sprint to support the commercialization of agricultural products, research, and ag tech, among other areas, to successfully launch entrepreneurs in the ag space both here and across the state.

Governmental Solutions:

At the Federal level, the Agriculture Industry has been deeply impacted by immigration policy and enforcement. There are those who do want to work in this industry but are without the proper credentials. Employers are legally barred from hiring these workers. There is a clear need for policy solutions that work for everyone, as one remedy for the workforce challenge.

It is possible that federal policy legalizing opportunity for agriculture workers and employers may be forthcoming. Until then, employers do have access to foreign-born workers through the appropriate, applicable work-visa programs and Migrant Farmworkers programs, which some employers do use, while others can't, due to the need for year-round workers.

At the state level, there are legislative efforts underway to address workforce challenges, including re-funding the Agricultural Workforce Development Program and the Healthy Food Financing Act, which includes workforce development as a component.

Additionally, the Departments of Workforce Connections, Economic Development, and Agriculture can work collaboratively through Sector Strategy efforts to understand and meet the needs of the industry. Supporting entrepreneurship through workforce dollars in the rural parts of the county, incentivizing innovation in crop management, and creating targeted efforts to reskill displaced workers from other industries with highly valued soft skills can open new doors for previously unidentified talent for the industry.

CONCLUSION

There's a lot of potential for the Agriculture Industry in Doña Ana County, especially as the US looks to prevent the threat of food chain disruption as revealed during the early days of the COVID-19 pandemic. The Mesilla Valley, is in many ways, a "fertile crescent" for agriculture in the state, with, unquestionably, the very best partners in education, workforce development, economic development, research, innovation, and entrepreneurship contained within its borders.

This report lays a foundation for moving forward on addressing workforce challenges by working collaboratively to reinvigorate the image and opportunities the industry presents. But it is just a beginning conversation of what will, hopefully, be many more to come.

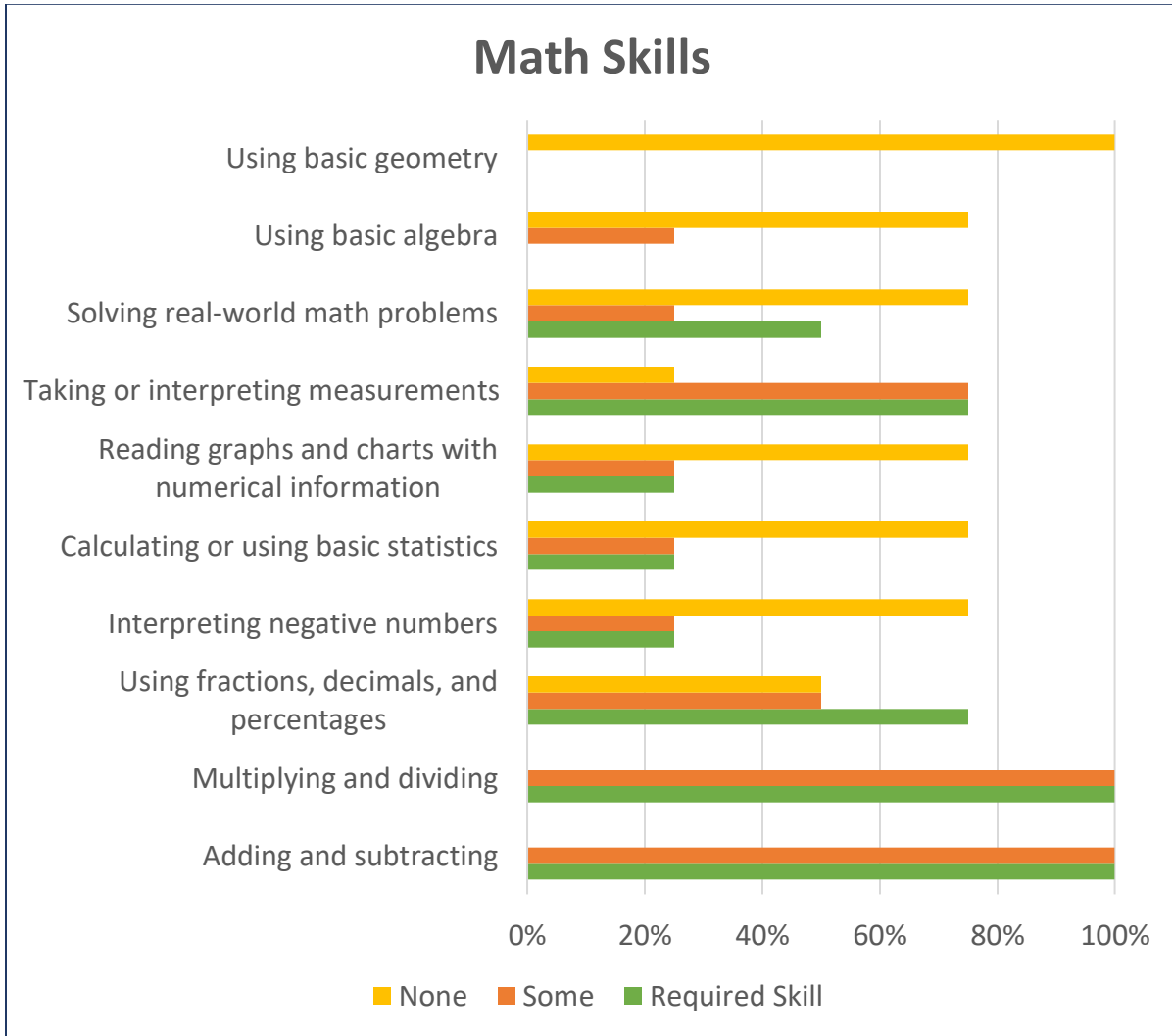
Together, we can leverage millions of dollars in assets, programs, and people to chart a bright course to the future for the agriculture employer, entrepreneur, and worker. We can leverage our prime location adjacent to an international and state border to build out value-added opportunities and increase the flow and distribution of the county's products to reap greater economic returns.

But success will require people passionate about the role of agriculture in the health of a county, of a state, and of a nation. And seeing themselves as an important part of that

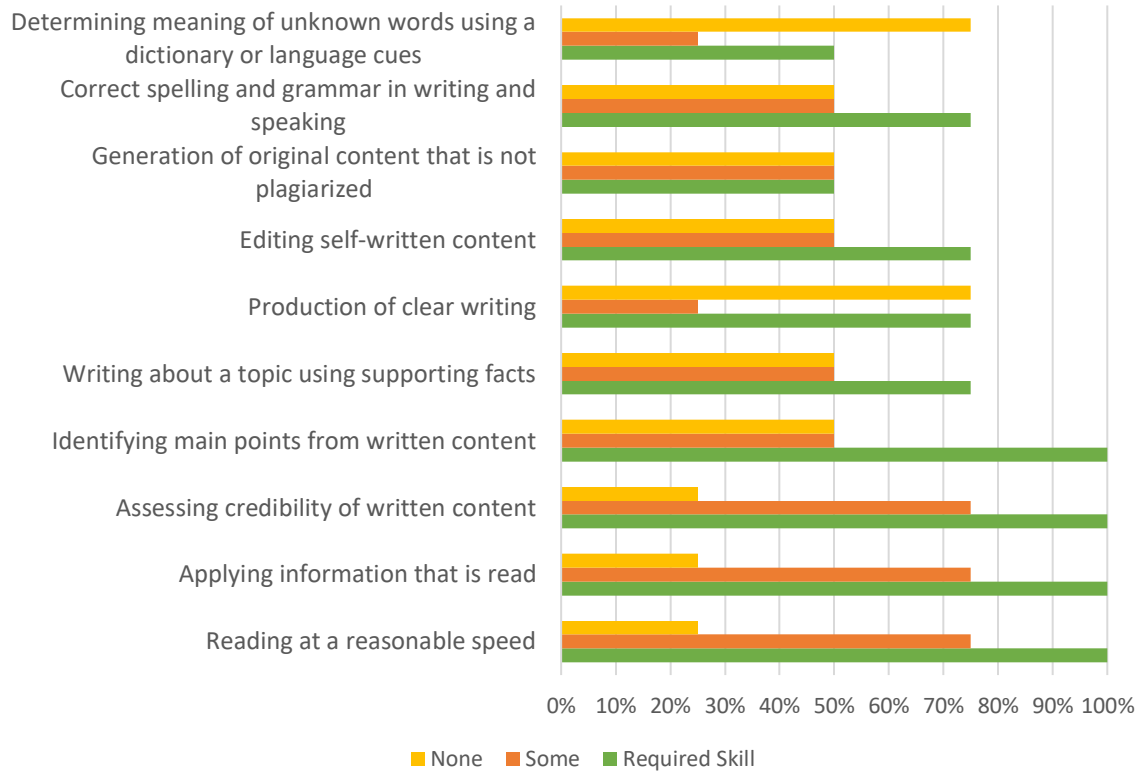
ecosystem will ensure the Agriculture Industry has the talent it needs to succeed for the long-term.

APPENDIX

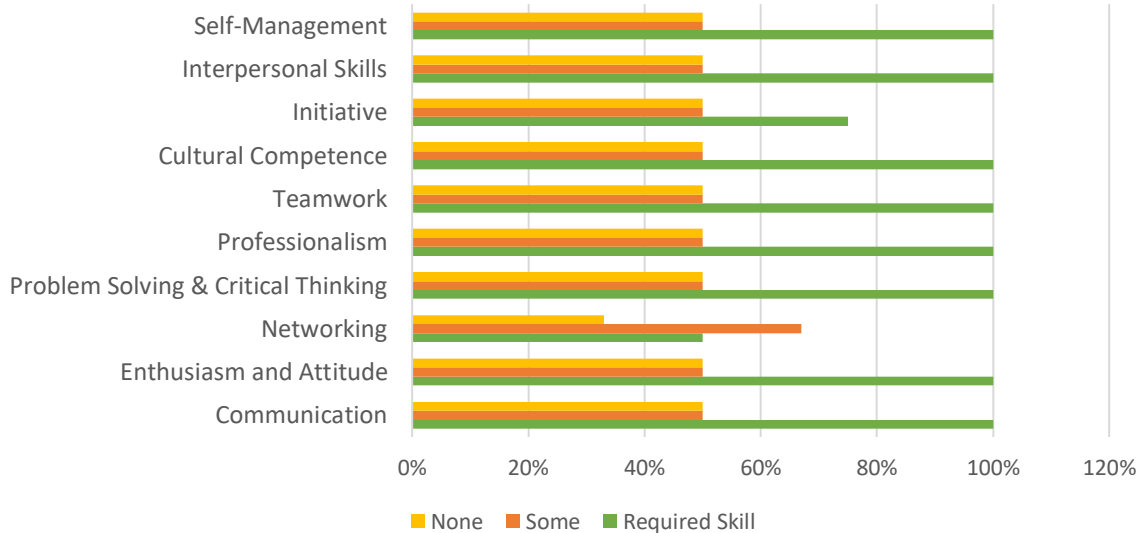
A. Skill Gaps by Category



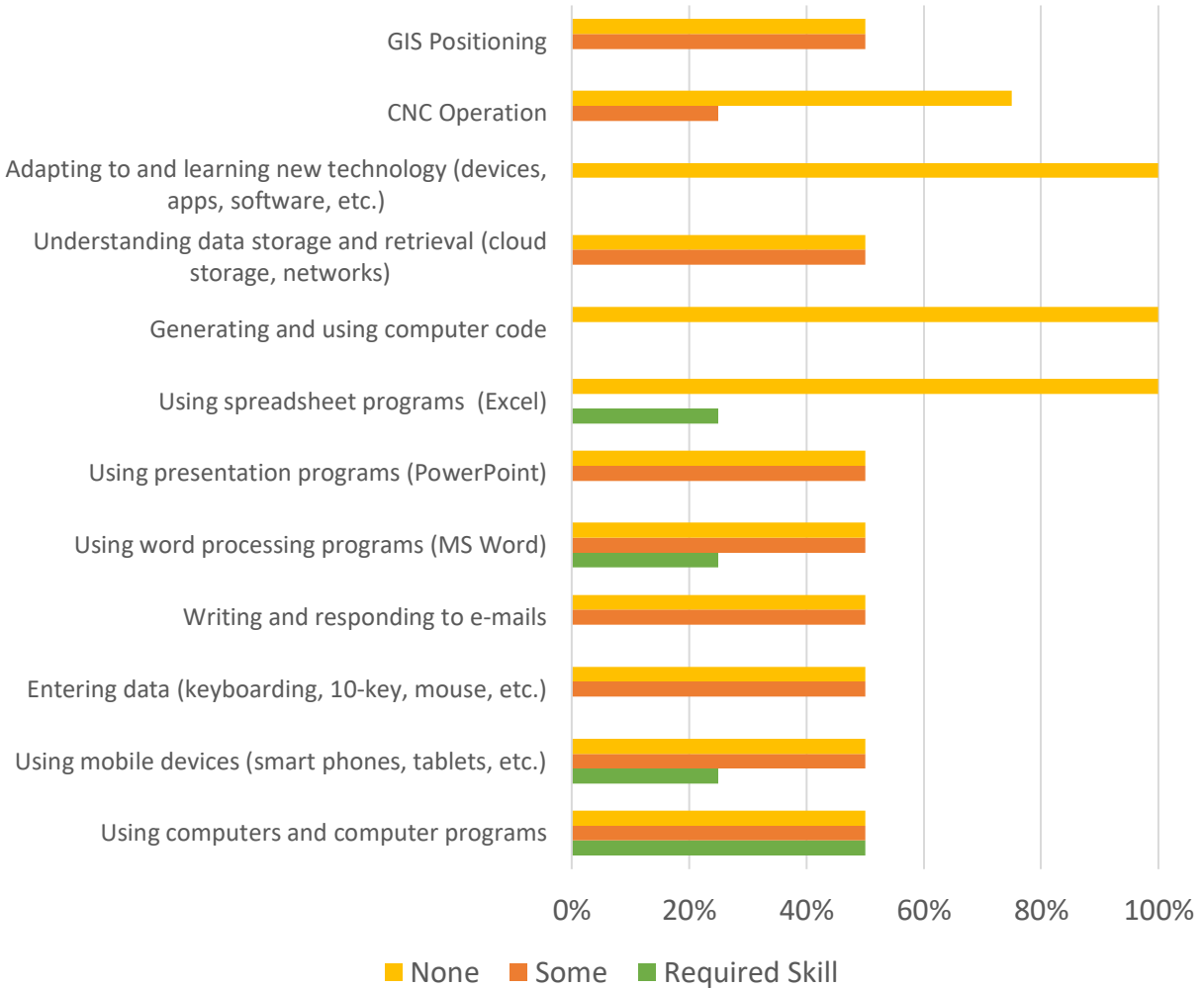
Reading, Writing, Language Skills



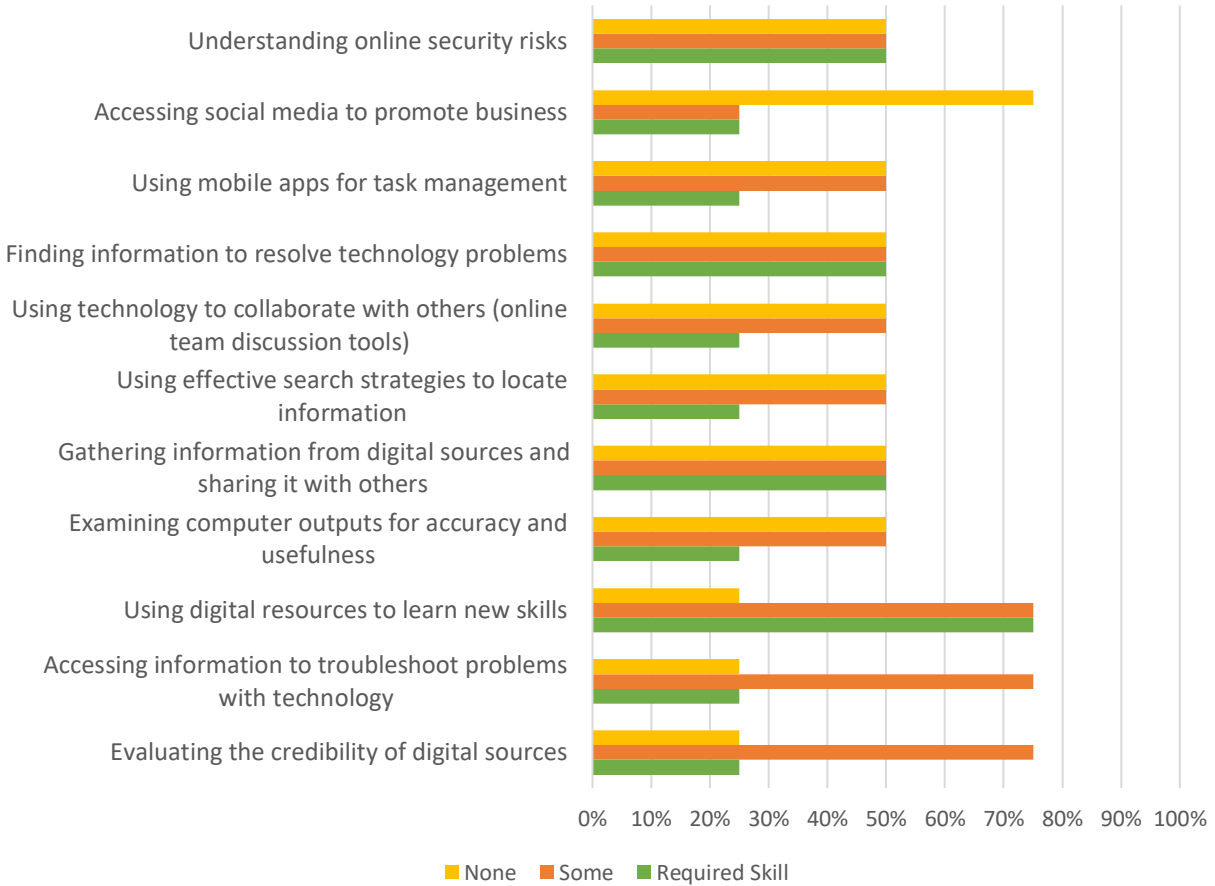
Employability Skills



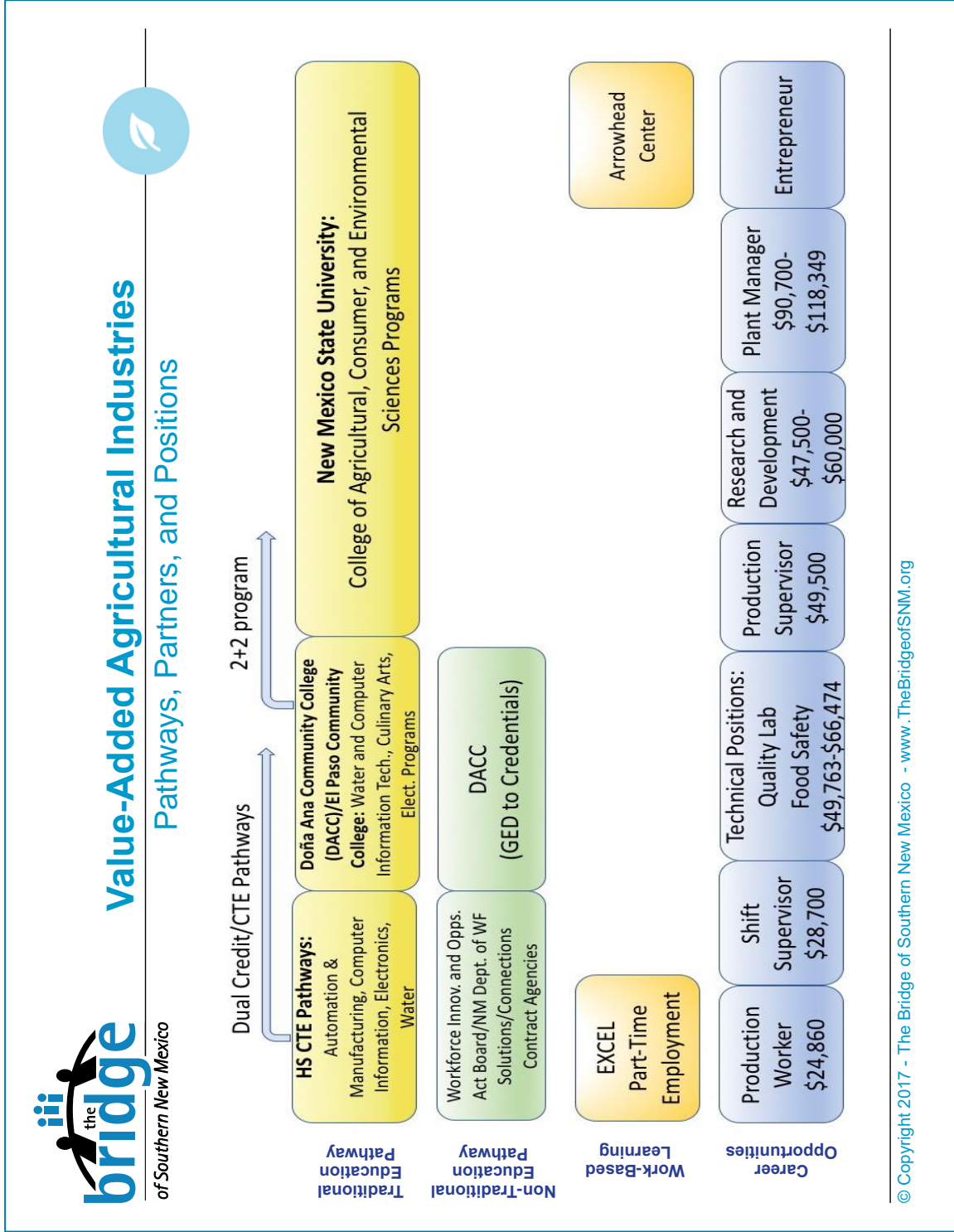
Technology Skills



Digital Literacy Skills



B. Agriculture Career Pathway



C. Example of Real-Time Job Listings in Agriculture – July 2019

Value Added Agriculture Industries

The Value Added Agriculture industry includes the following: Crop Production (NAICS 111); Animal Production and Aquaculture (NAICS 112); Food Manufacturing (NAICS 311); and Beverage and Tobacco Product Manufacturing (312)

INDUSTRY INFORMATION	
Number of Establishments	162
Average Weekly Wage	\$581.50
Employment, 2018	2484
Employment Change from 2017	-61 (-2.50%)
Location Quotient	2.36
INDUSTRY EMPLOYMENT PROJECTIONS	
Current Employment (2016)	2,572
Projected Employment (2026)	2,632
Projected Employment Growth (2016-2026)	2.3%
ONLINE JOB POSTINGS (July 2019)	
Total**	320
Las Cruces MSA	20
Southwestern Region	52
New Mexico	320

Employers with the most online job postings in these industries in the Las Cruces MSA (as of July 29, 2019)

OCCUPATION INFORMATION	
Common Occupations in Value Added Agriculture Industries	
Packers and Packagers; Retail Salespersons; Food Batchmakers; Stock Clerks; Inspectors; Truck and Tractor Operators; Maintenance & Repair Workers; Supervisors of Production Workers; Sales Representatives; Machinery Mechanics; Operations Managers; Production Managers; Agricultural Equipment Operators; Separating, Filtering, Operating, and Tenders; Production Workers; Transportation Managers	

Wages, Typical Education, & Employment for Select Occupations **

Occupation	Entry Wage	Median Wage	Typical Education Needed for Entry	Typical On-the-Job Training	Current Employment	Online Job Postings (July 2019)	Projected Annual Job Openings (to 2026)	Projected Employment Growth 2016 - 2026
All Occupations in the Las Cruces MSA	\$19,570	\$30,190	No formal educational	Short-term (<1 month)	70,430	4,768	9,269	Stable
Packers and Packers, Hand	\$18,090	\$18,800	No formal educational	Short-term (<1 month)	130	2	31	Declining
Retail Salespersons	\$18,150	\$22,900	No formal educational	Short-term (<1 month)	2,380	56	325	Stable
Food Batchmakers	\$18,810	\$22,580	High School Diploma or Eqv.	Moderate-term (<12 mos)	90	0	17	Stable
Stock Clerks, Sales Floor	\$18,930	\$23,680	High School Diploma or Eqv.	Short-term (<1 month)	1,050	1	125	Stable
Inspectors, Testers, Sorters, Samplers, and Weigh	\$19,880	\$31,930	High School Diploma or Eqv.	Moderate-term (<12 mos)	220	4	19	Declining
Industrial Truck and Tractor Operators	\$21,210	\$23,850	No formal educational	Short-term (<1 month)	70	14	310*	Declining
Maintenance and Repair Workers, General	\$21,650	\$30,630	High School Diploma or Eqv.	Moderate-term (<12 mos)	770	13	68	Stable
Agricultural Equipment Operators*	\$23,590	\$35,050	No formal educational	Moderate-term (<12 mos)	230	37	76	Stable
Separating, Filtering, Operating and Tenders*	\$26,440	\$35,540	High School Diploma or Eqv.	Moderate-term (<12 mos)	220	5	41	Stable
Agricultural & Food Science Technicians	\$28,540	\$41,020	Associate's degree	Moderate-term (<12 mos)	70*	2*	25	Stable
Production Workers, All Other*	\$28,050	\$49,700	High School Diploma or Eqv.	Moderate-term (<12 mos)	290	107	45	Stable
Supervisors/Production and Operating Workers	\$32,180	\$48,850	High School Diploma or Eqv.	None	130	10	19	Declining
Sales Representative, Wholesale and Manufact	\$32,190	\$39,810	High School Diploma or Eqv.	Moderate-term (<12 mos)	290	2	507*	Stable
Industrial Machinery Mechanics	\$33,440	\$49,230	High School Diploma or Eqv.	Long-term (12+ mos)	100	1	12	Stable
General and Operations Managers	\$45,990	\$74,240	Bachelor's Degree	None	980	16	107	Stable
Industrial Production Managers	\$70,480	\$93,020	Bachelor's Degree	None	40	1	32*	Declining
Transportation, Storage and Distribution Manag	\$62,340*	\$85,420*	High School Diploma or Eqv.	None	390	15	34	Stable

All data are for the Las Cruces MSA in 2018 unless otherwise noted. * Data are statewide. ** Data are for all industries. *** Data not available. Projected Employment Growth Definitions: Stable: 0.0 - 11.9%; Growing: 12% or more. Sources: NMDWS ER&A; Typical education & on-the-job training; BLS Occupational Projections & Worker Characteristics (www.bls.gov/emp/projections-and-characteristics.htm); Job vacancies: NM Workforce Connection Center online

D. Sample of NMSU Agriculture Careers/Wage Expectations

Please see next three pages

Agricultural Economics and Ag Business Paying low \$40K to Mid \$60K

	LC Average Annual Salary	NM Average Annual Salary	Nationwide Average Annual Salary	Required Education/Licensure
Customer Service Representative	\$30,178	\$32,450	\$35,503	HS/Certificate
Ranch/Farm Manager	\$48,853	\$50,573	\$56,957	Bachelor's Degree
Commodity Broker	\$60,427	\$67,688	\$71,091	Bachelor's Degree/FINRA Licensure
Credit/Financial Analyst	\$43,028	\$46,268	\$56,741	Bachelor's Degree/Certification
Commercial & Residential Loan Officer	\$85,823	\$88,844	\$100,058	Bachelor's Degree
Marketing Research Analyst	\$49,692	\$53,434	\$58,462	Bachelor's Degree
Procurement Specialist	\$46,271	\$49,755	\$54,437	Bachelor's Degree
Food Processing Mgr/Meat Processing	\$45,170	\$48,571	\$53,142	3 yrs experience in related area
Grain Broker	\$61,565	\$66,201	\$72,430	Bachelor's Degree
Logistics Mgr	\$94,506	\$101,621	\$111,183	Bachelor's Degree
Policy Analyst	\$49,273	\$52,982	\$57,968	Master's Degree
Insurance Adjuster	\$54,658	\$58,773	\$64,303	Bachelor's Degree
Real Estate Appraiser	\$45,785	\$49,233	\$53,865	Bachelor's Degree
Agricultural Sales, Chemical	\$49,535	\$51,279	\$57,752	Bachelor's Degree
Production Manager, Grapes	\$87,241	\$93,809	\$102,636	Bachelor's Degree
Crop Consultants	\$55,870	\$57,837	\$65,137	Bachelor's Degree
Produce Farm Manager	\$41,671	\$44,809	\$49,025	Bachelor's Degree
Retail Animal Feed	\$40,354	\$41,774	\$47,047	Bachelor's Degree
Government Regulations Officer	\$71,100	\$76,400	\$83,600	Bachelor's Degree
Agriculture Equipment Manufacturing/Sales	\$62,210	\$64,400	\$72,529	Bachelor's Degree
Viticulture (Product Development/Marketing)	\$55,752	\$57,752	\$64,999	Bachelor's Degree
Produce Marketing (Wholesale)	\$63,987	\$68,805	\$75,279	Bachelor's Degree

Agricultural and Extension Education

	LC Average Annual Salary	NM Average Annual Salary	Nationwide Average Annual Salary	Required Education/Licensure
Agriculture Teacher	\$38,352	\$39,764	\$44,726	BA and Teaching Licensure
Extension County Agent	\$69,090	\$71,634	\$80,574	Masters degree
Extension Assc I	\$40,712	\$43,777	\$47,896	Bachelors degree
Public Relationship Representative	\$44,998	\$48,386	\$52,939	Bachelor's Degree
Food Safety Coordinator	\$46,753	\$50,273	\$55,004	Bachelor's Degree
Financial Investment Advisor	\$64,925	\$69,813	\$76,382	Bachelor's Degree

Entomology, Plant Pathology, and Weed Science *Some go to Grad, Vet or Med School

	LC Average Annual Salary	NM Average Annual Salary	Nationwide Average Annual Salary	Required Education/Licensure
Food Inspector	\$38,101	\$41,001	\$44,901	HS Diploma/ 5 yrs experience
Consumer Safety Inspector	\$44,475	\$47,823	\$52,323	Bachelor's Degree
Biological Science Technician	\$35,634	\$38,317	\$41,922	Bachelor's Degree
Agricultural Specialist (Customs Border Protection)	\$41,202	\$42,653	\$48,037	Bachelor's Degree
Microbiologist (USDA-APHIS)	\$39,935	\$42,942	\$46,983	Bachelor's Degree
Agricultural Science Research Tech			\$45,685	Bachelor's Degree
Natural Resource Specialist	\$49,954	\$53,716	\$58,770	Bachelor's Degree

Fish, Wildlife and Conservation Ecology *Some go to Grad School

	LC Average Annual Salary	NM Average Annual Salary	Nationwide Average Annual Salary	Required Education/Licensure
Natural Resources Specialist	\$49,954	\$53,716	\$58,770	Bachelor's Degree
Biological Science Tech	\$35,634	\$38,317	\$41,922	Bachelor's Degree
Forestry tech	\$31,997.00	\$33,123	\$37,304	Associate's Degree
Fish Biologist	\$39,657	\$41,053	\$46,235	Bachelor's Degree
Rangeland Management Specialist	\$50,821	\$52,610	\$59,252	Bachelor's Degree
Outdoor Recreation Specialist	\$30,152	\$31,213	\$35,154	Bachelor's Degree
Wildlife Refuge Specialist	\$32,953	\$34,113	\$38,419	Bachelor's Degree
Wildlife Specialist	\$57,174	\$59,186	\$66,657	Bachelor's Degree

Plant and Environmental Sciences

	LC Average Annual Salary	NM Average Annual Salary	Nationwide Average Annual Salary	Required Education/Licensure
Post Harvest Technician	\$30,000.00	\$38,000.00	\$30,000.00	BS Agriculture
QA Officer/Technician	\$30,000.00	\$39,626.00	\$54,837.00	BS Agriculture

AGRICULTURE INDUSTRY ROUNDTABLE

A Special Thank You

We are deeply grateful to the team of leaders who served on our Industry Roundtable. Their commitment of time, wisdom, experience, and their spirit of innovation provided us actionable intelligence to holistically prepare our New Mexico True Talent to be ready for some of the best jobs in our county. We look forward to our continued partnership!



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