

# YEARLY PLANNING DISCUSSION TEMPLATE

## General Questions

Program Name Agriculture Academic Year 2025-2026

### 1. Has your program mission or primary function changed in the last year?

While the fundamental mission of the Agriculture program continues to serve its original purpose of effectively preparing students for both transfer and workforce entry in the diverse sectors of the agriculture industry, the scope of the program must regularly pivot to adapt to the frequent changes in the industry and to address the ever emerging scientific and technological advancements that will keep the program relevant from year to year.

The current program offerings in Agriculture, Agricultural Science, Agricultural Plant Science, Agricultural Business, Agricultural Pest Control Adviser Preparation (1 of 2): Crop Protection, and Agricultural Pest Control Adviser Preparation (2 of 2): Production Systems will remain cornerstones of this program. However, thoughtful expansion of the program offerings, as recommended by the Agriculture Advisory Committee, will increase the opportunities to prepare students for advanced study and/or work placement in sectors of increasing industry importance. Furthermore, feedback from high school feeder programs is solicited for consideration of the goals and interests of the local high school community of students.

Based on industry input, it remains clear that the development of a degree/certificate related to precision/mechanized/automated agriculture will be crucial to address a local gap in workforce preparation. A program that addresses food safety curriculum will also be imperative to keep the program viable and relevant. The best approach for a food safety course of study might be through the non-credit program and there have been several discussions between the Agriculture program coordinator and the AHC Non-credit program personnel regarding this possibility.

An additional program that should be considered based on current student pathway interest and incoming high school graduates from local agriculture programs is animal science. Although there is no longer a robust animal production industry in Santa Barbara County, the significant concentration on animal husbandry and production in the high school FFA programs tends to create large groups of students who wish to major in animal science. This is a highly competitive major to which students apply at Cal Poly State University, SLO and there is substantial interest among students who wish to pursue that pathway. The Agriculture program coordinator has contemplated creating an AST in Animal Science in the past, but that would require the addition of two new courses, and enrollment concerns have prevented that plan from moving forward. After observing a continued increase in animal science interest this year, the topic was brought before the Advisory Committee in May 2026. The option of creating an in-house degree, rather than an AST, which would focus on meeting the transfer selection criteria for Cal Poly SLO, was discussed. All of the required and desired course for transfer in animal science to Cal Poly SLO are already offered at AHC. Developing a program that simply brings together those courses would aid students who wish to earn an AHC degree and also prepare for transfer. This option would also help clarify program completions because an agriculture program degree would be

earned rather than simply meeting transfer requirements or earning a degree in Liberal Studies: Mathematics and Science, which is a current popular pathway for animal science/pre-vet majors.

**2. Were there any noteworthy changes to the program over the past year? (eg, new courses, degrees, certificates, articulation agreements)**

There were not any new courses, degrees, or certificates created this year, although the new course that was created last year, AG 166 Crop Protection, has been approved for the 2026-2027 course catalog. There were, however, new concurrent enrollment (CCAP) course agreements approved: Cuyama Valley High School – AG 152 Introduction to Animal Science, AG 155 Introduction to Mechanized Agriculture, AG 156 Introduction to Environmental Horticulture, AG 157 Ag Sales, Communication & Leadership, and AG 191 Agriculture Production Enterprise; Santa Maria High School – AG 150 Introduction to Agribusiness.

A noteworthy challenge the Agriculture program is facing is the potential impact on course enrollment, particularly for agriculture-specific elective courses, due to the significant student enrollment in AHC CCAP agriculture courses. Of the 717 students in the total program headcount in 2025-2026, 67% (483 students) were CCAP students. The college elective courses continue to struggle to fill with sufficient enrollment even after the electives were all shifted to every other year offerings. The office of Institutional Effectiveness is currently working on data compilation to evaluate if the large CCAP course offerings and enrollment is having a negative impact on AHC agriculture course enrollment. The results of this data inquiry will serve to guide future decision making for the program.

**3. Is your two-year program map in place and were there any challenges maintaining the planned schedule?**

The program maps for all Agriculture program degrees and certificates have all been established and are published on the Agriculture program web page:

<https://www.hancockcollege.edu/pathways/sciences-technologies/agriculture.php> A careful review was conducted this year to ensure that the changes in the Pest Control Adviser Preparation certificate programs with the new AG 166 course replacing AG 162, AG 163, and AG 164 are accurately reflected in the public-facing program map.

Challenges remain, and appear to be increasing, in maintaining the planned elective course schedule due to low enrollment of elective courses. This issue is also noted in some of the courses that are required for certain degrees/certificates but not necessarily required for transfer (such as AG 126 Fertilizers & Plant Nutrition and AG 130 Integrated Pest Management). The courses in the program that enjoy adequate, even sometimes robust enrollment, are those that articulate to universities and those that also count as general education non-lab and lab sciences, which draw students from across multiple disciplines. The attempt to mitigate these issues by offering most of those elective classes on an every-other-year basis, seems to be waning in its ability to maintain adequate enrollment. The program coordinator has requested data analyses from Institutional Effectiveness to answer questions such as: (1) What are the enrollment patterns of students taking AG153 and their subsequent enrollment flow into, and major selection at, AHC and (2) Does enrollment in CCAP AG152, AG164, AG155, AG156, AG157 (electives) impact enrollments in AHC programs and enrollment in AG153 specifically.

#### 4. Were there any staffing changes?

The addition of a new part-time instructor to cover the second section of AG 161 Introduction to Plant Science was implemented in Fall 2025 when Jocelyn Alvarez co-taught a second section with Erin Krier – with Jocelyn covering the second lecture and Erin covering the second lab. The schedule for Fall 2026 includes shifting the second section for AG 161 to an evening class, which will allow Jocelyn to teach both the lecture and lab and also increases access to the class for working students.

#### 5. What were your program successes in your area of focus last year?

The area of focus for the 2024-2025 academic year was *Curriculum and Teaching Design*. The “plans for change or innovation” based on the results of the Program Review through the lens of curriculum and teaching design were as follows, with comments reflecting on their successes integrated here:

- 2024-2025 Plan:** With support from the Sciences & Technologies Success Team, the Agriculture program intends to establish a “first-year experience” for incoming students to create an improved sense of connection and community for students in an agriculture major. Research suggests that students who feel a sense of belonging and have a support system in their peers and faculty will be more likely to succeed in their classes and ultimately in program completion.

**Reflection on Success:** Allan Hancock College has implemented a First Year Experience (FYE) pilot program to begin in Fall 2026, but this is a campus-wide, multi-discipline effort that does not place students in cohorts based on intended major. The focus of this new FYE program is to support students in their English and Math courses through intentional community. A similar concept was implemented in Fall 2019 through a collaboration between the AHC Agriculture, Viticulture & Enology, Food Science & Nutrition, and Culinary Arts programs called Field to Table Week of Welcome. This program ran in various forms for 3 years and proved extremely beneficial for the students in these related disciplines to form a supportive community of students, counselors, and faculty. Without funding invested in the Field to Table Week of Welcome, the program has not been offered in recent years. The piloting of a similar program via the new FYE opportunity will hopefully bring renewed institutional support for discipline-specific cohorts that can re-establish an Agriculture-based experience. It is also crucial that the Agriculture program have a space dedicated to students for studying, meeting, connecting, and collaborating. The request for an Agriculture Center on campus remains a high program priority to address this need.
- 2024-2025 Plan:** The collection, entry, and analysis of learning assessment data for all agriculture courses will finally come to fruition and will provide greater insights for program faculty that can be utilized for improvement in course engagement, retention, and success.

**Reflection on Success:** The Agriculture program coordinator/full-time faculty has opted to work with the Director of Institutional Effectiveness, Dr. Craig Bach, to implement a new approach to learning assessment for the Agriculture program. The justification and description of this pilot program is found in this document prepared by Dr. Bach:

## Learning Assessment and the 2024 ACCJC Standards of Accreditation

### Overview

The 2024 ACCJC Standards deliberately moved away from prescriptive, nuts-and-bolts “how to do SLO assessment” language and toward a lighter, outcome- and equity-framed umbrella that colleges must interpret locally. This was an intentional change in the standards to emphasize results over processes.

### Rationale for the Change

The following provides context for this decision:

#### 1. Streamline and De-Prescribe

ACCJC’s own rollout materials say the new standards were redesigned to be “streamlined and holistic,” to “use clear language and minimize redundancies,” and to shift the focus from “do you have a process?” to “what are the results, and how do you use them?” That naturally trims the old check-the-box SLO mechanics from the standards text.

[Introducing the 2024 Accreditation Standards](#)

#### 2. Keep SLOs but Move Details Outside the Standards

SLOs didn’t vanish; they’re just referenced at a higher level. Standard 2 explicitly expects institutions to “evaluate student learning and achievement data,” and the official companion “Review Criteria & Possible Evidence” states that “the institution defines student learning outcomes for courses and academic programs.” The “how often/how exactly” guidance was pushed into the review criteria/handbook rather than the Standards themselves.

[ACCJC Accreditation Standards](#)

#### 3. Move the Evidentiary Burden to Results and Use (not on a mandated process)

The new Accreditation Handbook reinforces this philosophy with questions like: What are the results? How effectively do actions support success for all students? What did the institution learn, and what will it do differently? These are all right out of the “continuous improvement” literature. The standards then can avoid prescribing assessment cycles, instruments, or SLO roll-up schemas, but these are the very things that are required to achieve the outcomes and uses they want to see documented.

[ACCJC Accreditation Handbook](#)

#### 4. Equity Framing > compliance mechanics

Across ACCJC’s communications and field briefings, the 2024 Standards elevate equity, inclusive practices, and disaggregated outcomes. That emphasis squeezes out space for granular SLO procedures in the standards language, replacing it with “show me the impact of your efforts” expectations around achievement and learning for *all student groups*.

[Program Review and the Equity-Driven 2024 ACCJC Standards](#)

## 5. Flexibility for a Range of Modalities (including CBE / direct assessment)

ACCJC’s scope was expanded by the U.S. Department of Education to include direct-assessment programs (e.g., competency-based education (CBE)). If you’re accrediting everything from traditional courses to CBE to baccalaureate and fully online programs, hyper-specific SLO process mandates can become unworkable or outdated. Less process-specific, result-oriented standards make it easier to cover heterogeneous models without constant rewrites.

[U.S. Department of Education Expands ACCJC’s Scope to Include Direct Assessment Programs](#)

## 6. Practical Politics of Peer Review

ACCJC’s “Purpose and Process” language stresses that standards are a framework for quality and improvement—peer reviewers interpret them in the individual context of each institution. That’s easier to do with leaner principles and companion evidence lists than with prescriptive checklists that can bog teams down. ACCJC also decided that some documentation would be handled via checklists outside the narrative.

[The Value of Accreditation with ACCJC](#)

## Impact on Learning Assessment

The language on learning outcomes assessment in the ACCJC Standards is thinner; however, the same process and systems expectations remain as the required underpinning of the use and impact goals now expressed in the Standards. In particular, these structural details include defining and aligning SLOs at all three levels, evaluating student learning, using the data to improve instruction and learning environments, and showing the impact of data-informed changes (especially for disproportionately impacted groups). The specifics (e.g., assessment cycles, mapping conventions, sampling plans, closing-the-loop documentation) are now “institutional choices,” evidenced via the Review Criteria/Possible Evidence and explained in the ISER.

[Accreditation Standards](#)

In practice, colleges that are looking for prescriptive outcomes assessment process details in the Standards will feel as if the revised Standards are weaker than previous versions. Colleges that already have mature assessment ecosystems can keep using them so long as they can demonstrate results and equitable improvement with disaggregated data.

[Program Review and the Equity-Driven 2024 ACCJC Standards](#)

## Hit Points

**Rationale** ACCJC wanted to (a) reduce compliance fatigue, (b) emphasize measurable results and equity over procedure, and (c) future-proof the Standards for new modalities. That’s coherent... but it absolutely makes the Standards read as “soft” on learning assessment.

**Cost:** The pendulum may have swung far enough that weaker colleges won't get the nudge they used to get from explicit SLO requirements. The burden shifts to peer reviewers—and to your local policies—to insist on rigor.

### **Next Steps**

Treat the Review Criteria/Handbook as your de facto SLO playbook, and make your local expectations explicit (cycle, mapping, sampling, thresholds, close-the-loop timelines). Build your ISER evidence around (1) clearly articulated SLOs at course/program/ GE/ILO levels, (2) disaggregate findings, (3) document use of results with concrete changes, and (4) observe impact on learning and achievement. Those are the pressure points reviewers will be trained to look for under the 2024 regime.

[Accreditation Standards With Review Criteria and Suggestions for Evidence](#)

Dimension	Description	Key Citation(s)	Exemplary Vision
1. Communication & Transparency of Learning Outcomes	Learning outcomes are clearly stated, posted publicly, and accessible to students and stakeholders.	National Institute for Learning Outcomes Assessment (NILOA). (2019). <i>Excellence in Assessment Design</i> . Tucker, C., Drummond, S., & Ostrogersky, T. (2022). <i>ASSESS-IT: An Institutional Rubric for Programmatic Assessment</i> . Hutchings, P. (2010). <i>Opening Doors to Faculty Involvement in Assessment</i> . NILOA Occasional Paper #4. Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials: Planning, Implementing, and Improving Assessment</i> . Ewell, P. (2009). <i>Assessment, Accountability, and Improvement: Rewriting the Tension</i> . NILOA White Paper. Moore, D. E., Green, J. S., & Galls, H. A. (2009). <i>Outcome Framework for Learning Activities</i> . Bloom, B. S. et al. (2001). <i>A Taxonomy for Learning, Teaching, and Assessing</i> . La Marca, P. M. (2001). <i>Alignment of Standards and Assessments as an Accountability Criterion</i> . Liu, M., Wrobel, D., & Blankson, I. (2010). <i>Program Alignment Mapping in Higher Education</i> . Vidic, B., & Weitauf, H. M. (2002). <i>Vertical Integration in Curriculum Design</i> . Doran (1981); Suskie (2014); Timmerman et al. (2011)	Students can find and understand learning outcomes for any course or program. These outcomes are integrated into advising, program websites, and syllabi.
2. Alignment Across Levels and Core Competencies	Outcomes are aligned from course to program to institutional levels, and with core competencies or strategic goals.	Moore, D. E., Green, J. S., & Galls, H. A. (2009). <i>Outcome Framework for Learning Activities</i> . Bloom, B. S. et al. (2001). <i>A Taxonomy for Learning, Teaching, and Assessing</i> . La Marca, P. M. (2001). <i>Alignment of Standards and Assessments as an Accountability Criterion</i> . Liu, M., Wrobel, D., & Blankson, I. (2010). <i>Program Alignment Mapping in Higher Education</i> . Vidic, B., & Weitauf, H. M. (2002). <i>Vertical Integration in Curriculum Design</i> . Doran (1981); Suskie (2014); Timmerman et al. (2011)	All outcomes are clearly scaffolded. Course outcomes build toward program outcomes, which align to institutional goals and graduation competencies.
3. Quality Learning Outcomes	Outcomes are specific, measurable, student-centered, and clearly framed (Bloom's Taxonomy) and number between 5 and 8 for each specific use context.	Suskie, L. (2018). <i>*Assessing Student Learning*</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> . Doran, G. T. (1981). <i>There's a S.M.A.R.T. Way to Write Management's Goals and Objectives</i> . Suskie, L. (2018). <i>Assessing Student Learning: A Common Sense Guide</i> . Timmerman, B. E. C., et al. (2011). <i>Development of a Universal Rubric for Scientific Reasoning</i> . Moskal, B. M., & Leydens, J. A. (2000). <i>Scoring Rubric Development: Validity and Reliability</i> . Jonsson, A., & Svingby, G. (2007). <i>Use of Scoring Rubrics: Reliability and Educational Consequences</i> . Kuh, G. D., et al. (2015). <i>Using Evidence of Student Learning to Improve Higher Education</i> . Cronbach, L. J. (2000). <i>Course Improvement through Evaluation</i> . Banta, T. W., & Blatch, C. (2011). <i>Closing the Assessment Loop</i> . Shirley, R. C., & Volkwein, J. F. (1978). <i>Establishing Academic Program Priorities</i> . Hansen, M. J., et al. (2014). <i>Academic Hope and Effective Student Success Strategies</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> .	All outcomes use measurable verbs, reflect deep learning, and are consistent with Bloom's Taxonomy. Outcomes are reviewed annually for relevance and clarity.
4. Learning Assessments	Identified assessments provide clear and meaningful evaluative feedback about the achievement of learning outcomes.	Suskie, L. (2018). <i>*Assessing Student Learning*</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> . Doran, G. T. (1981). <i>There's a S.M.A.R.T. Way to Write Management's Goals and Objectives</i> . Suskie, L. (2018). <i>Assessing Student Learning: A Common Sense Guide</i> . Timmerman, B. E. C., et al. (2011). <i>Development of a Universal Rubric for Scientific Reasoning</i> . Moskal, B. M., & Leydens, J. A. (2000). <i>Scoring Rubric Development: Validity and Reliability</i> . Jonsson, A., & Svingby, G. (2007). <i>Use of Scoring Rubrics: Reliability and Educational Consequences</i> . Kuh, G. D., et al. (2015). <i>Using Evidence of Student Learning to Improve Higher Education</i> . Cronbach, L. J. (2000). <i>Course Improvement through Evaluation</i> . Banta, T. W., & Blatch, C. (2011). <i>Closing the Assessment Loop</i> . Shirley, R. C., & Volkwein, J. F. (1978). <i>Establishing Academic Program Priorities</i> . Hansen, M. J., et al. (2014). <i>Academic Hope and Effective Student Success Strategies</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> .	The assessments that have been identified and are in use are manageable and provide important insights into student learning and how faculty, staff, and other stakeholders can use them to support student success.
5. Stakeholder Engagement	Assessment engages faculty, staff, students, alumni, and/or external stakeholders in design and review.	Suskie, L. (2018). <i>*Assessing Student Learning*</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> . Doran, G. T. (1981). <i>There's a S.M.A.R.T. Way to Write Management's Goals and Objectives</i> . Suskie, L. (2018). <i>Assessing Student Learning: A Common Sense Guide</i> . Timmerman, B. E. C., et al. (2011). <i>Development of a Universal Rubric for Scientific Reasoning</i> . Moskal, B. M., & Leydens, J. A. (2000). <i>Scoring Rubric Development: Validity and Reliability</i> . Jonsson, A., & Svingby, G. (2007). <i>Use of Scoring Rubrics: Reliability and Educational Consequences</i> . Kuh, G. D., et al. (2015). <i>Using Evidence of Student Learning to Improve Higher Education</i> . Cronbach, L. J. (2000). <i>Course Improvement through Evaluation</i> . Banta, T. W., & Blatch, C. (2011). <i>Closing the Assessment Loop</i> . Shirley, R. C., & Volkwein, J. F. (1978). <i>Establishing Academic Program Priorities</i> . Hansen, M. J., et al. (2014). <i>Academic Hope and Effective Student Success Strategies</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> .	Students, faculty, staff, alumni, and employers regularly co-design and review assessment tools. Their voices shape curriculum and services.
6. Use of Assessment Results (Closing the Loop)	Assessment results are used to inform changes. Programs demonstrate impact and close the loop with data.	Suskie, L. (2018). <i>*Assessing Student Learning*</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> . Doran, G. T. (1981). <i>There's a S.M.A.R.T. Way to Write Management's Goals and Objectives</i> . Suskie, L. (2018). <i>Assessing Student Learning: A Common Sense Guide</i> . Timmerman, B. E. C., et al. (2011). <i>Development of a Universal Rubric for Scientific Reasoning</i> . Moskal, B. M., & Leydens, J. A. (2000). <i>Scoring Rubric Development: Validity and Reliability</i> . Jonsson, A., & Svingby, G. (2007). <i>Use of Scoring Rubrics: Reliability and Educational Consequences</i> . Kuh, G. D., et al. (2015). <i>Using Evidence of Student Learning to Improve Higher Education</i> . Cronbach, L. J. (2000). <i>Course Improvement through Evaluation</i> . Banta, T. W., & Blatch, C. (2011). <i>Closing the Assessment Loop</i> . Shirley, R. C., & Volkwein, J. F. (1978). <i>Establishing Academic Program Priorities</i> . Hansen, M. J., et al. (2014). <i>Academic Hope and Effective Student Success Strategies</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> .	Programs act on data each year, making measurable changes. Students experience redesigned curricula, better advising, and improved engagement.
7. Assessment Infrastructure & Planning	Systems, timelines, tools, and resources are in place to support continuous and integrated assessment practices.	Suskie, L. (2018). <i>*Assessing Student Learning*</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> . Doran, G. T. (1981). <i>There's a S.M.A.R.T. Way to Write Management's Goals and Objectives</i> . Suskie, L. (2018). <i>Assessing Student Learning: A Common Sense Guide</i> . Timmerman, B. E. C., et al. (2011). <i>Development of a Universal Rubric for Scientific Reasoning</i> . Moskal, B. M., & Leydens, J. A. (2000). <i>Scoring Rubric Development: Validity and Reliability</i> . Jonsson, A., & Svingby, G. (2007). <i>Use of Scoring Rubrics: Reliability and Educational Consequences</i> . Kuh, G. D., et al. (2015). <i>Using Evidence of Student Learning to Improve Higher Education</i> . Cronbach, L. J. (2000). <i>Course Improvement through Evaluation</i> . Banta, T. W., & Blatch, C. (2011). <i>Closing the Assessment Loop</i> . Shirley, R. C., & Volkwein, J. F. (1978). <i>Establishing Academic Program Priorities</i> . Hansen, M. J., et al. (2014). <i>Academic Hope and Effective Student Success Strategies</i> . Banta, T. W., & Palomba, C. A. (2014). <i>Assessment Essentials</i> . Fulcher, K., & Orem, C. (2010). <i>Evolving from Quantity to Quality</i> . Dawson, P. (2017). <i>Assessment Rubrics: Towards Clearer Design and Practice</i> . Tucker, C., et al. (2023). <i>ASSESS-IT Rubric Development</i> . National Institute for Learning Outcomes Assessment. (2018). <i>Assignment Charter Toolkit</i> .	Meaningful assessments are used to evaluate the achievement of learning outcomes. Assessment timelines are shared across the institution. Programs use a shared platform for reporting. IR, student affairs, and faculty collaborate.
8. Culture of Equity, Improvement, and Engagement	Assessment reflects commitment to equity, transparency, and institutional improvement. Practices are inclusive and growth-oriented.	Montenegro, E., & Jankowski, N. A. (2017). <i>Equity and Assessment: Toward Culturally Responsive Assessment</i> . Dowd, A. C., & Bension, E. M. (2015). <i>Engaging the Race Question</i> . Bension, E. M. (2005). <i>Closing the Achievement Gap in Higher Education</i> . Harper, S. R., & Simmons, I. (2019). <i>Black Students at Public Colleges and Universities</i> . U.S. Department of Education. (2021). <i>Advancing Equity in Higher Education</i> .	Assessment identifies and responds to inequities. Data is disaggregated. Students from marginalized backgrounds help co-create improvements.

### **[#2 Reflection on Success, continued]**

The Agriculture program coordinator is actively working to implement this new Student Learning Outcome assessment process, beginning with the Agricultural Plant Science AST program and courses therein. This authentic approach to evaluating student learning will enrich the meaning of the data collected and will support the integration of that data into tangible classroom instructional and assessment improvements. Further details on the status of this process are found below in the Learning Outcomes Assessment section of the Program Review report.

- 2024-2025 Plan:** In order to address the CCAP issues presented in the 2024-2025 Program Review, the program coordinator will continue to advocate for improved third-party oversight of the course content, learning outcomes, rigor, and overall learning experiences within the concurrent enrolled agriculture courses. Consideration will be given to modify the minimum qualifications to exclude master's in education degrees and require discipline-specific master's degrees.

**Reflection on Success:** The AHC Agriculture program courses that include a lab have all had course modifications, as needed, to remove any minimum qualifications that would allow an instructor without a master's degree to teach one of those courses. This will provide increased standards of the program's expectations for instructor qualifications. During Summer of 2026, the program coordinator will complete the course modifications for all remaining courses to remove all minimum qualifications that do not include a master's degree. Additionally, the Agriculture program coordinator is serving on the college's CCAP Taskforce, which has met weekly during the spring semester to begin addressing the many concerns emerging from the widespread approval of concurrent enrollment courses. The unique discipline-specific issues that the agriculture program faces, as were presented in the 2024-2025 Program Review, have been shared with the CCAP Taskforce and are receiving attention via taskforce solutions. This includes a robust update to the CCAP teacher evaluation process, development of a faculty mentor system, and clarification of syllabus content.

## **Learning Outcomes Assessment**

- Please summarize key results from this year's assessment.**

This year, assessment efforts have concentrated on establishing and effective new evaluation tool that will be ready to implement in Fall 2026. The new process begins by determining which course Student Learning Outcomes are reflected in each course learning objective – see table below.

**AG 161 - Introduction to Plant Science | Course Map**

**Course Objectives**

1	<b>AG 161 - Introduction to Plant Science   Course Map</b>																		
2	A study of the physical, chemical, and biological properties of soils, including plant nutrition and factors affecting the availability of nutrients. Composition, value, use and application of fertilizer materials and soil amendments will be covered. The course is not open to students who are enrolled in or have received credit for VEN 125.																		
3	<b>Student Learning Outcomes</b>	<b>Coverage</b>	<b>Validation</b>	<b>Expected Achievement Level</b>															
4	AG161-SLO1 Identify the importance and characteristics of higher plants.	4			AG161-01	AG161-02	AG161-03	AG161-04	AG161-05	AG161-06	AG161-07	AG161-08	AG161-09						
5	AG161-SLO2 Understand components and propagation in higher plants.	6			X	X	X	X		X	X	X							X
6	AG161-SLO3 Associate photosynthesis, respiration, and translocation with abiotic and biotic factors that modify them.	6				X			X	X		X	X	X					X
7																			

**Comments and Notes**

Once we get an understanding of the assignments and opportunities for students to learn and demonstrate that learning of the course objectives (assessments), then we will finalize this form and create similar ones for each of the required courses in the program. We also will have a better idea of the pedagogical and educational philosophies that drive the program.



Armed with this comprehensive evaluation of what specific components of the course requirements align with what course learning objective will then follow through to identify which course Student Learning Outcome is being assessed which will eventually lead to the determination of which Program Learning Outcome is being assessed. Through this process, a more accurate and meaningful assessment of student learning will be available beginning with the upcoming AG 161 Introduction to Plant Science class in Fall 2026 for the 2026-2027 Program Review.

**5. Please summarize your reflections, analysis, and interpretation of the learning outcome assessment and data.**

Following the implementation of the pilot process described above in Fall 2026, assessment data will be input into the SPOL program and available in the 2026-2027 Program Review.

**6. Please summarize recommendations and/or accolades that were made within the program/department.**

n/a

**7. Please review and attach any changes to planning documentation, including PLO rubrics, associations, and cycles planning.**

Changes have been described above and the content of relevant documents was embedded in previous sections of this report.

**Distance Education (DE) Modality Course Design Peer Review Update (Please attach documentation extracted from the *Rubric for Assessing Regular and Substantive Interaction in Distance Education Courses*)**

**Not applicable to the Agriculture programs – no online course offerings exist.**

- a. Which courses were reviewed for regular and substantive interactions (RSI)?
- b. What were some key findings regarding RSI?
  - Some strengths:
  - Some areas of possible improvement:
- c. What is the plan for improvement?

**Program Data: Success and Retention in Agriculture Courses/Program by Race**

**Success & Retention**

Success % Retention %

		2020-21	2021-22	2022-23	2023-24	2024-25
AHC	Hispanic	72% 88%	69% 85%	70% 87%	71% 88%	73% 89%
	White	79% 90%	77% 87%	77% 88%	81% 91%	81% 91%
	Other	75% 89%	72% 86%	74% 87%	77% 90%	77% 90%
Grand Total		82% 95%	87% 97%	86% 97%	86% 96%	89% 95%
AG100	Hispanic	81% 89%	61% 82%	77% 85%	63% 81%	80% 97%
	Other	100% 100%	50% 100%	100% 100%	100% 100%	100% 100%
	White	67% 89%	56% 78%	100% 100%	80% 80%	80% 80%
AG125	Hispanic	76% 92%	100% 100%	74% 95%	71% 88%	77% 89%
	Other	100% 100%	100% 100%	100% 100%	90% 90%	100% 100%
	White	73% 100%	100% 100%	90% 90%	71% 71%	80% 80%
AG126	Hispanic					90% 100%
	White					100% 100%
AG130	Hispanic	44% 89%	100% 100%	100% 100%	89% 100%	88% 100%
	Other		100% 100%		100% 100%	100% 100%
	White	100% 100%	100% 100%	67% 100%	100% 100%	100% 100%
AG149	Hispanic			93% 100%	81% 88%	57% 93%
	Other			100% 100%	100% 100%	86% 100%
	White			55% 100%	67% 67%	67% 92%
AG150	Hispanic	82% 94%	82% 97%	84% 96%	86% 92%	78% 89%
	Other	100% 100%	100% 100%	100% 100%	100% 100%	91% 100%
	White	89% 89%	83% 83%	100% 100%	93% 93%	94% 94%
AG152	Hispanic	85% 99%	84% 97%	91% 99%	99% 100%	89% 97%
	Other	100% 100%	67% 83%	100% 100%	100% 100%	100% 100%
	White	94% 100%	100% 100%	94% 100%	94% 100%	100% 100%
AG153	Hispanic	75% 92%	78% 100%	95% 95%	100% 100%	93% 93%
	Other	100% 100%	100% 100%	100% 100%	50% 50%	100% 100%
	White	100% 100%	88% 100%	100% 100%	92% 100%	100% 100%
AG154	Hispanic	72% 93%	80% 98%	81% 98%	83% 100%	90% 90%
	Other	100% 100%	100% 100%	100% 100%		100% 100%
	White	100% 100%	88% 100%	78% 89%	0% 100%	50% 50%
AG155	Hispanic	69% 98%	91% 99%	85% 100%	86% 100%	100% 100%
	Other	67% 100%	100% 100%	100% 100%		100% 100%
	White	0% 100%	75% 100%	100% 100%	0% 100%	
AG156	Hispanic	84% 98%	87% 98%	87% 99%	91% 100%	94% 99%
	Other	100% 100%	89% 100%	100% 100%	100% 100%	80% 80%
	White	95% 95%	95% 100%	78% 100%	100% 100%	100% 100%
AG157	Hispanic	88% 97%	93% 100%	81% 95%	97% 100%	82% 88%
	Other	100% 100%	100% 100%	0% 100%	100% 100%	
	White	88% 100%	67% 100%	100% 100%	75% 75%	88% 100%

		2020-21	2021-22	2022-23	2023-24	2024-25
AG158	Hispanic	90% 94%	94% 99%	90% 98%	85% 99%	90% 98%
	Other	100% 100%	100% 100%	100% 100%	60% 100%	91% 100%
	White	93% 100%	93% 100%	91% 100%	75% 100%	92% 100%
AG160	Hispanic	75% 85%	65% 90%	75% 100%	53% 93%	90% 95%
	Other	100% 100%	67% 100%	100% 100%	100% 100%	100% 100%
	White	75% 100%	100% 100%	67% 100%	60% 80%	86% 86%
AG161	Hispanic	76% 88%	88% 100%	85% 91%	82% 87%	88% 92%
	Other	100% 100%	50% 50%	100% 100%	0%	80% 80%
	White	100% 100%	83% 83%	89% 89%	100% 100%	60% 60%
AG162	Hispanic	100% 100%				
	White	100% 100%				
AG163	Hispanic		100% 100%			
	White		100% 100%			
AG164	White			86% 100%		
AG165	Hispanic			92% 100%	80% 90%	
	Other			100% 100%	0% 100%	
	White			63% 63%	100% 100%	
AG189	Hispanic	100% 100%			100% 100%	
	White			100% 100%	71% 100%	100% 100%
AG190	Hispanic					93% 93%
	White					100% 100%
AG191	Hispanic				100% 100%	97% 100%
	Other				100% 100%	
	White				100% 100%	100% 100%
AG315	Hispanic	57% 57%	100% 100%	80% 100%		
	Other	0% 100%		100% 100%		
	White	33% 50%	100% 100%	67% 100%		
TOTAL	Hispanic	81% 95%	86% 97%	86% 97%	86% 96%	88% 95%
	White	86% 95%	89% 97%	85% 95%	85% 92%	87% 92%
	Other	92% 100%	84% 93%	98% 98%	89% 95%	91% 97%

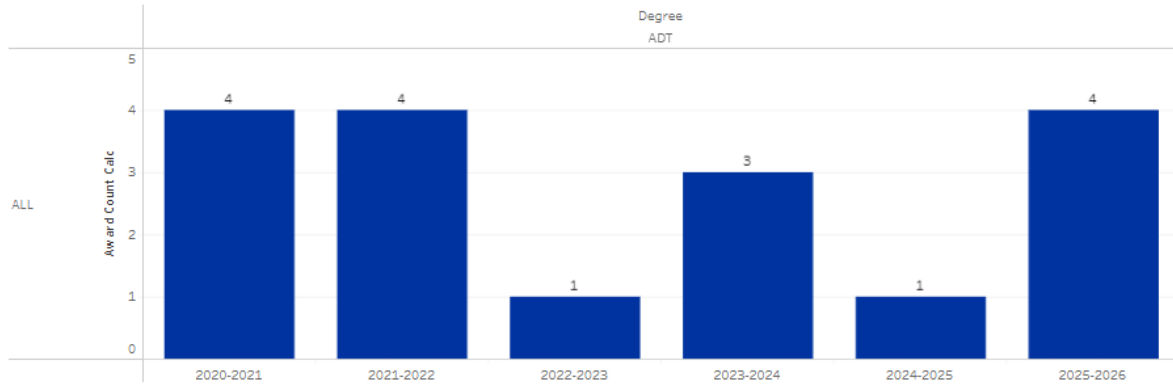
**Program Data: Success and Retention in Agriculture Courses/Program by Gender**

		2020-21	2021-22	2022-23	2023-24	2024-25
AHC	Female	75% 89%	71% 86%	72% 87%	74% 88%	75% 89%
	Male	73% 88%	71% 86%	72% 88%	73% 89%	75% 90%
	Non-Binary	67% 87%	69% 84%	68% 86%	75% 91%	78% 91%
		2020-21	2021-22	2022-23	2023-24	2024-25
Grand Total		82% 95%	87% 97%	86% 97%	86% 96%	89% 95%
AG100	Female	72% 94%	63% 84%	92% 92%	69% 77%	71% 100%
	Male	83% 86%	55% 79%	78% 89%	64% 84%	86% 91%
	Non-Binary		100% 100%			
AG125	Female	74% 100%	100% 100%	79% 89%	50% 79%	76% 88%
	Male	78% 91%	100% 100%	78% 97%	82% 90%	79% 86%
	Non-Binary				50% 50%	100% 100%
AG126	Female					100% 100%
	Male					90% 100%
AG130	Female	100% 100%	100% 100%	100% 100%	100% 100%	80% 100%
	Male	44% 89%	100% 100%	88% 100%	92% 100%	100% 100%
	Non-Binary				100% 100%	
AG149	Female			67% 100%	40% 40%	67% 67%
	Male			80% 100%	90% 95%	72% 97%
	Non-Binary			100% 100%	100% 100%	0% 100%
AG150	Female	75% 81%	90% 100%	81% 100%	89% 92%	87% 97%
	Male	90% 100%	75% 92%	89% 95%	88% 94%	80% 88%
	Non-Binary			100% 100%		100% 100%
AG152	Female	86% 99%	83% 95%	93% 99%	97% 100%	94% 98%
	Male	88% 100%	86% 100%	100% 100%	100% 100%	81% 96%
	Non-Binary	100% 100%		0% 100%		100% 100%
AG153	Female	100% 100%	100% 100%	83% 83%	100% 100%	88% 88%
	Male	80% 93%	75% 100%	100% 100%	91% 97%	96% 96%
	Non-Binary			100% 100%	100% 100%	
AG154	Female	73% 93%	72% 100%	76% 93%	89% 100%	95% 95%
	Male	82% 96%	92% 96%	85% 100%	79% 100%	79% 79%
	Non-Binary		100% 100%		0% 100%	
AG155	Female	83% 100%	100% 100%	100% 100%	76% 100%	100% 100%
	Male	65% 98%	89% 99%	84% 100%	87% 100%	100% 100%
AG156	Female	88% 99%	84% 99%	94% 99%	90% 100%	94% 96%
	Male	85% 95%	97% 97%	77% 100%	97% 100%	91% 100%
	Non-Binary		100% 100%	100% 100%	100% 100%	100% 100%
AG157	Female	93% 100%	97% 100%	88% 96%	94% 94%	91% 100%
	Male	88% 94%	75% 100%	78% 91%	92% 100%	75% 80%
	Non-Binary	0% 100%			100% 100%	

AHC	Female					
	Male					
	Non-Binary					
		2020-21	2021-22	2022-23	2023-24	2024-25
AG158	Female					
	Male					
	Non-Binary					
AG160	Female					
	Male					
	Non-Binary					
AG161	Female					
	Male					
	Non-Binary					
AG162	Male					
AG163	Male					
AG164	Female					
	Male					
AG165	Female					
	Male					
AG189	Female					
	Male					
AG190	Female					
	Male					
AG191	Female					
	Male					
	Non-Binary					
AG315	Female					
	Male					
TOTAL	Female					
	Male					
	Non-Binary					

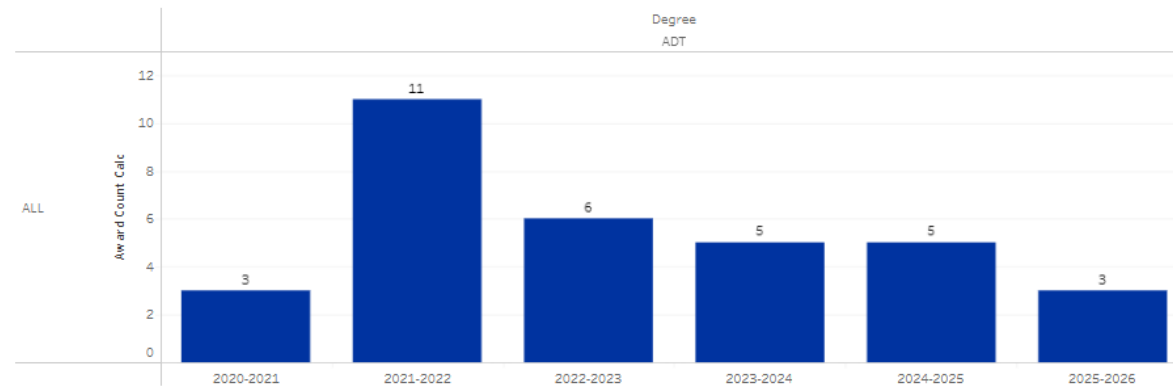
Success and retention data for Agriculture Courses when disaggregated by race and by gender shows high rates of course persistence and completion: with persistence rates for all races and genders being greater than 90% overall and completion rates hovering close to 90% overall. Without the ability to remove CCAP rates from this dataset, it is not valuable to further analyze the specific course statistics at this time.

**Program Data: Awards Earned by Degree/Certificate**



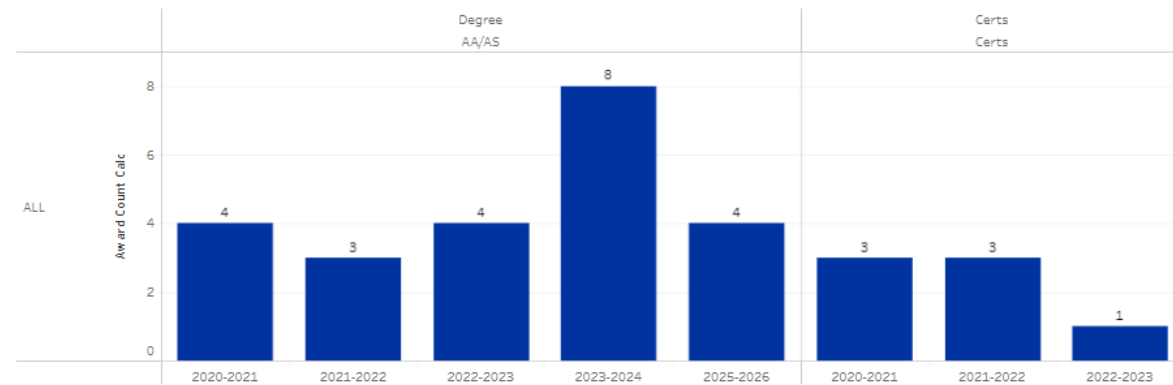
**Award Detail** Credential Program: Agricultural Business

Code	Description	Credential Program	Credential Major	Graduation Term Academic Year					
				2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
<b>Grand Total</b>				4	4	1	3	1	4
AS-T	Associate of Science AS Transfer degree	Agricultural Business	Ag Business for Transfer						3
			Ag Business for Transfer CSU	4	4	1	3	1	1
			Ag Business for Transfer UC				1		



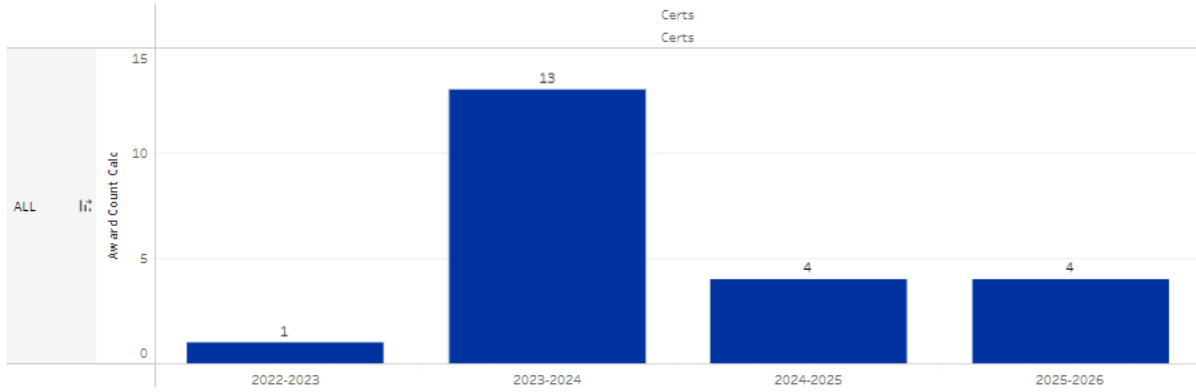
**Award Detail** Credential Program: Agricultural Plant Science

Code	Description	Credential Program	Credential Major	Graduation Term Academic Year					
				2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
<b>Grand Total</b>				3	11	6	5	5	3
AS-T	Associate of Science AS Transfer degree	Agricultural Plant Science	AgPlant Science for Trnsfr C..	3	9	6	4	4	2
			AgPlant Science for Trnsfr UC	1	3		2	2	
			Agric Plant Sci for Transfer						1



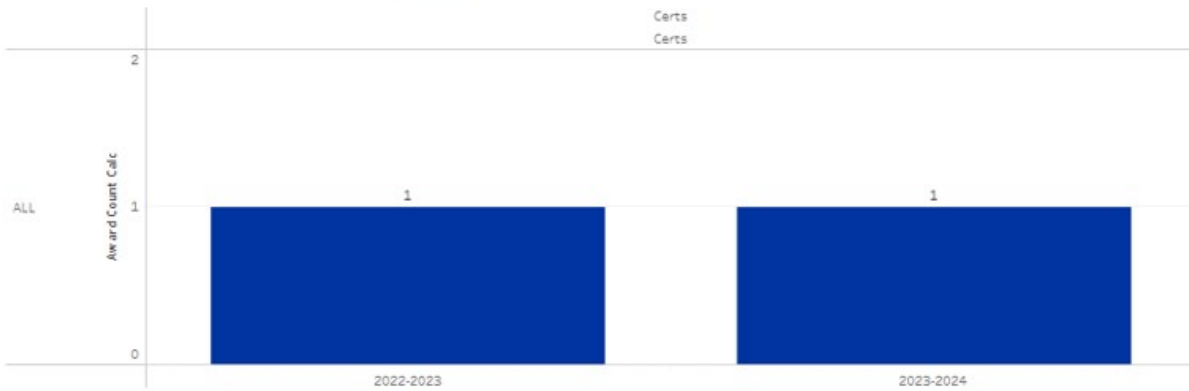
**Award Detail** Credential Program: Agricultural Science

Code	Description	Credential Program	Credential Major	Graduation Term Academic Year				
				2020-2021	2021-2022	2022-2023	2023-2024	2025-2026
<b>Grand Total</b>				5	4	5	8	4
AS	Associate of Science AS degree	Agricultural Science	Agricultural Science	4	3	4	8	4
C2	Certificate 18-30semester unit	Agricultural Science	Agricultural Science	3	3	1		



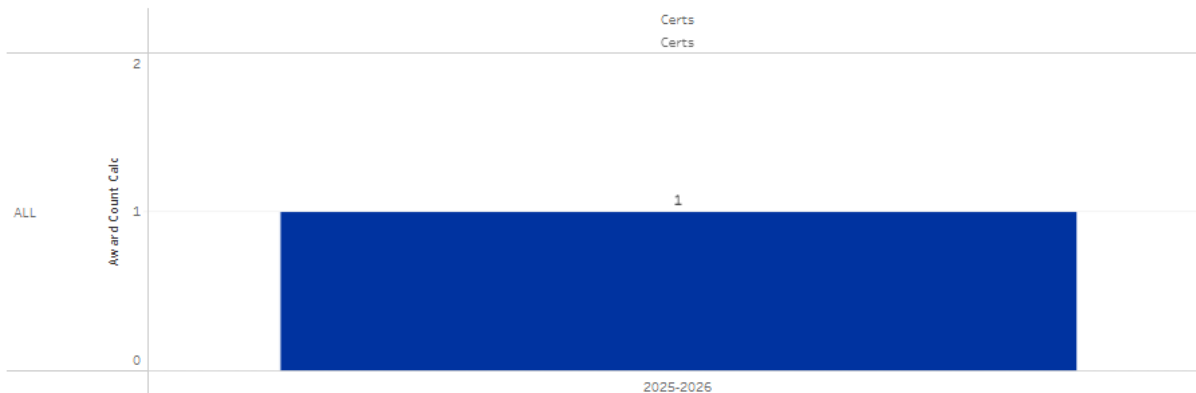
Award Detail Credential Program Agriculture

Code	Description	Credential Program	Credential Major	Graduation Term Academic Year			
				2022-2023	2023-2024	2024-2025	2025-2026
Grand Total				1	13	4	4
CS	Certificate requiring 16 to fewer than 30...	Agriculture	Agriculture	1	13	4	4



Award Detail Credential Program PCA Prep Crop Protection

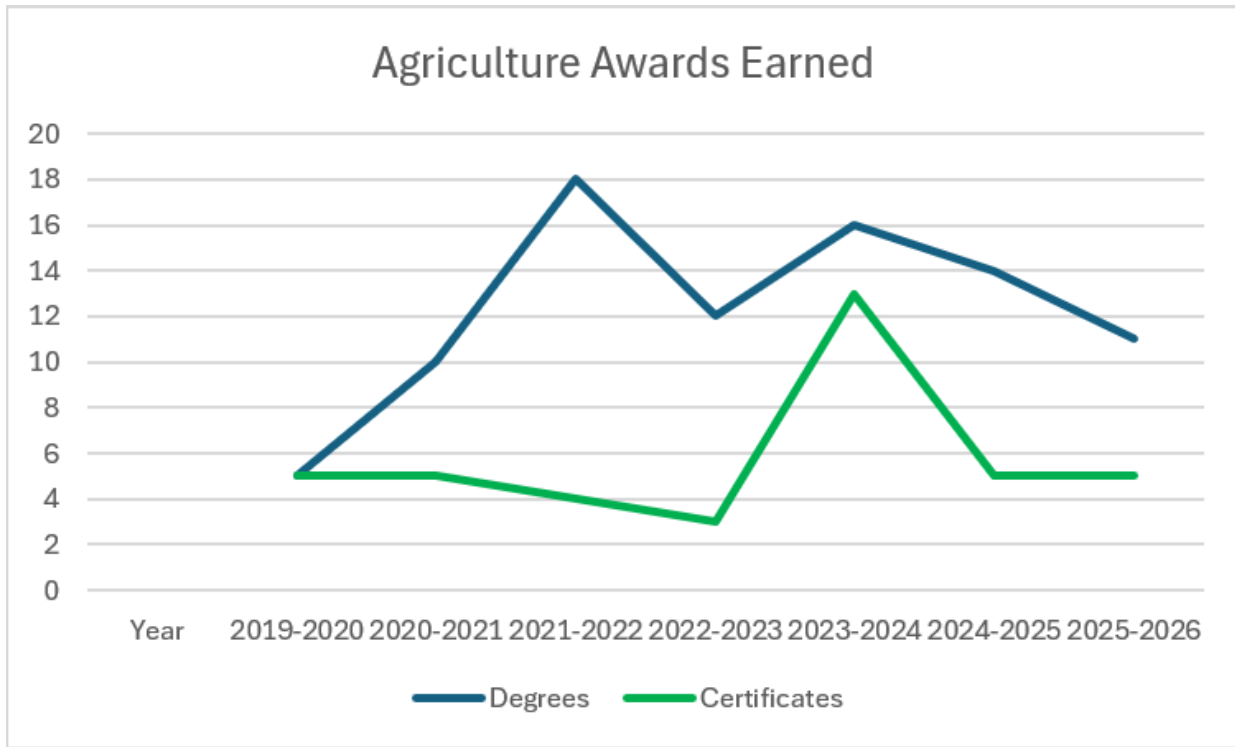
Code	Description	Credential Program	Credential Major	Graduation Term Academic Year	
				2022-2023	2023-2024
Grand Total				1	1
CS	Certificate requiring 16 to fewer than 30...	PCA Prep Crop Protection	PCA Prep Crop Protection	1	1



Award Detail Credential Program PCA Prep Production Sy...

Code	Description	Credential Program	Credential Major	Graduation Term Academic Year
				2025-2026
Grand Total				1
CS	Certificate requiring 16 to fewer than 30...	PCA Prep Production Syste...	PCA Prep Production Syste...	1

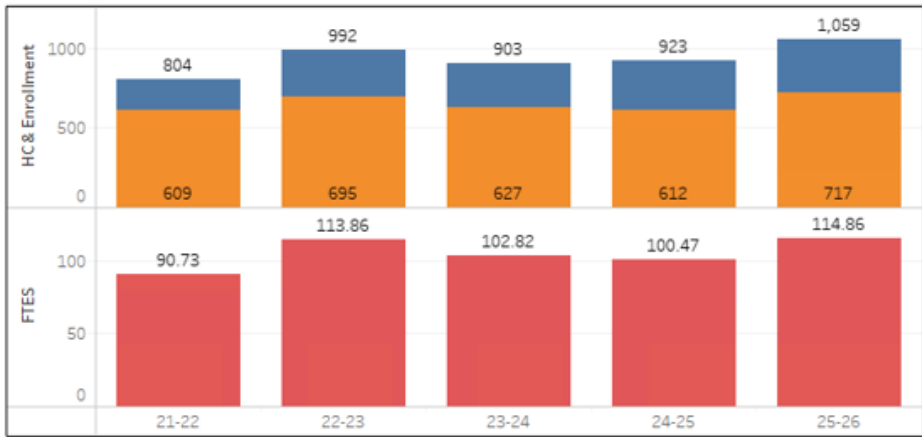
**Program Data: Awards Earned by Degree/Certificate Trends**



**Program Data: Headcount and Enrollment, with and without CCAP students**

Headcount, Enrollment, FTES  
Demographics, & Course Enrollments

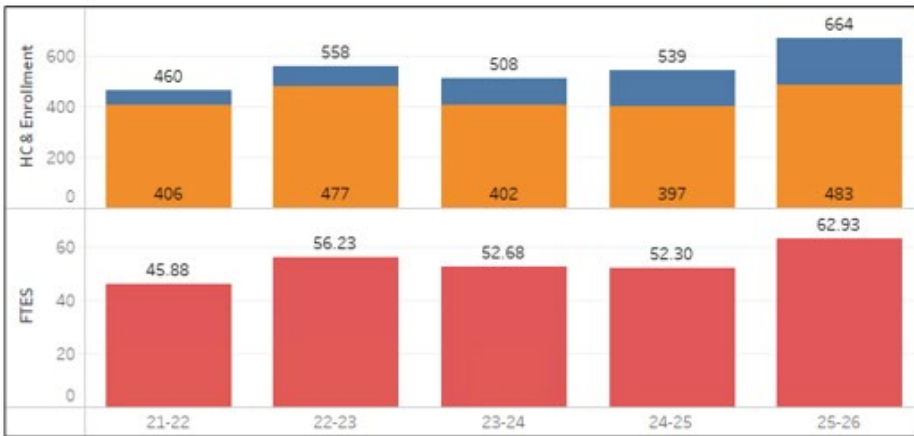
Time Period Type 1: Academic Year | subject\_: AG | CCAP: (All) | Success Retention Persist | Demo 1: Ethnicity



	21-22	22-23	23-24	24-25	25-26
Asian	4	4	3	5	3
Black	2	4	3	10	7
Hispanic	503	580	526	487	550
Nat Am	2	2	4		2
Other	13	11	12	13	18
Pac Isl			2	1	
Two or More	9	8	10	9	18
White	76	86	67	87	119
<b>Grand Total</b>	<b>609</b>	<b>695</b>	<b>627</b>	<b>612</b>	<b>717</b>

# Headcount, Enrollment, FTES Demographics, & Course Enrollments

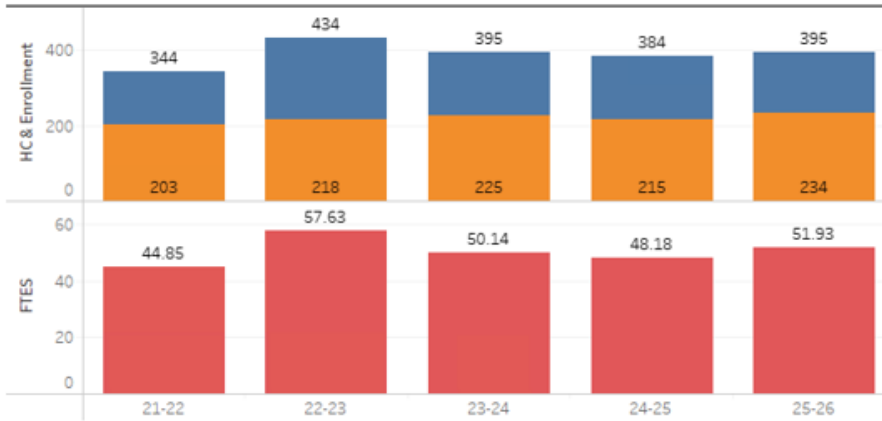
Time Period Type 1 **subject\_**  
 Academic Year **AG**  
 Course Campus **(All)**  
 Demo 1 **Ethnicity**  
 CCAP **CCAP**  
 Success Retention Persist



	21-22	22-23	23-24	24-25	25-26
Asian	1	2	1	2	
Black		3		4	4
Hispanic	357	431	360	340	393
Nat Am	1	1	1		2
Other	9	8	8	8	11
Two or More	6	2	6	4	11
White	32	30	26	39	62
<b>Grand Total</b>	<b>406</b>	<b>477</b>	<b>402</b>	<b>397</b>	<b>483</b>

# Headcount, Enrollment, FTES Demographics, & Course Enrollments

Time Period Type 1 **subject\_**  
 Academic Year **AG**  
 Course Campus **(All)**  
 Demo 1 **Ethnicity**  
 CCAP **Exclude CCAP**  
 Success Retention Persist



	21-22	22-23	23-24	24-25	25-26
Asian	3	2	2	3	3
Black	2	1	3	6	3
Hispanic	146	149	166	147	157
Nat Am	1	1	3		
Other	4	3	4	5	7
Pac Isl			2	1	
Two or More	3	6	4	5	7
White	44	56	41	48	57
<b>Grand Total</b>	<b>203</b>	<b>218</b>	<b>225</b>	<b>215</b>	<b>234</b>

## **CTE two-year review of labor market data and pre-requisite review**

### **a. Does the program meet documented labor market demand?**

According to the State of California Employment Development Department (EDD), the number of annual job openings in Santa Barbara County for those with knowledge and skills in plant science, agricultural technology & sciences, and agriculture business is estimated to be 11,440. The median annual wage earned by Farmers, Ranchers and Other Agricultural Managers is \$123,380 and likewise, the soil and plant scientists have the potential to earn upwards of \$150,000 annually. With respect to the employment opportunities in the state of California for Farmers, Ranchers, and Other Agricultural Managers; First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers, and Soil and Plant Scientists, there is expected to be over 100,000 job openings annually with an mean annual wage earned of more than \$90,000. The continued expansion of the AHC Agriculture program, guided by regional industry partner needs and recommendations, seeks to meet the documented and projected workforce needs.

According to the most recent (Fall 2023) Occupational Overview Reports (see attached Lightcast Analysis documents), regional employment in all agricultural sectors is higher than the national average with “aggressive” job posting demand for most agricultural occupations. There is a notable lack of preparation for students to enter into the rapidly emerging agriculture technology sector, which includes precision agriculture, automated technologies, robotics, GIS/GPS guided equipment, and mechanized agriculture. A lack of funding to support the development of this critical and rapidly expanding sector of the local industry is further impaired by the lack of adequate instructional space for program expansion. Continued agriculture advisory committee recommendations are to consider developing a partnership with a local business that work in the agriculture technology space for a potential hands-on lab application in the industry in light of the lack of on-campus space and equipment. However, the recent development of a drone class in the AHC Photography program appears to have some promise for agriculture students. A collaboration has been established between multiple disciplines where drone applications are crucial and is likely to result in the compilation of existing AHC courses to create a Certificate of Achievement for those students who wish to explore the utilization of these advancing technologies in the agriculture industry. The draft proposal for required courses is likely to include AG 161 Introduction to Plant Science, AG 125 Introduction to Soil Science, AG 130 Integrated Pest Management, GEOG 155 Introduction to GIS with Lab, and PHTO 152 Introduction to Drone Piloting and Imaging.

Wage and job outlook data for Santa Barbara County and California can be found in the following datasets from the State of California Employment Development Department and O\*NET Online, which clearly reflect the “bright outlook” for careers in multiple agriculture sectors and the higher-than-average wages for agriculture employees in both California and Santa Barbara County specifically:

## Projections of Employment by Occupation, 2022 - 2032

**Occupations Matched to Top Code(s):**

010300 **Plant Science**

**Geography:** Santa Barbara County

**Counties:** Santa Barbara County

Annual Job Openings by Occupation

SOC Code	Occupation Title	2022 Employment	Annual Job Openings <sup>1</sup>
	(Link to Occupation Profile)		
119013	<a href="#">Farmers, Ranchers, and Other Agricultural Managers</a>	5,430	5,310
451011	<a href="#">First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers</a>	1,070	1,480
	<b>Total</b>	<b>6,500</b>	<b>6,790</b>

Table Generated on 5/24/2026 7:46:31 AM

<sup>1</sup>Total Job Openings are the sum of new jobs from growth plus net replacements. Annual job openings are total job openings divided by the number of years in the projection period.

## Projections of Employment by Occupation, 2022 - 2032

**Occupations Matched to Top Code(s):**

010100 **Agriculture Technology and Sciences, Gen**

**Geography:** California

**Counties:** All California Counties

Annual Job Openings by Occupation

SOC Code	Occupation Title	2022 Employment	Annual Job Openings <sup>1</sup>
	(Link to Occupation Profile)		
191012	<a href="#">Food Scientists and Technologists</a>	3,400	3,040
191013	<a href="#">Soil and Plant Scientists</a>	1,700	1,610
	<b>Total</b>	<b>5,100</b>	<b>4,650</b>

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<sup>1</sup>Total Job Openings are the sum of new jobs from growth plus net replacements. Annual job openings are total job openings divided by the number of years in the projection period.

## Projections of Employment by Occupation, 2022 - 2032

**Occupations Matched to Top Code(s):**

011200 **Agriculture Business, Sales and Service**

**Geography:** Santa Barbara County

**Counties:** Santa Barbara County

Annual Job Openings by Occupation

SOC Code	Occupation Title	2022 Employment	Annual Job Openings <sup>1</sup>
	(Link to Occupation Profile)		
119013	<a href="#">Farmers, Ranchers, and Other Agricultural Managers</a>	5,430	5,310
	<b>Total</b>	<b>5,430</b>	<b>5,310</b>

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<sup>1</sup>Total Job Openings are the sum of new jobs from growth plus net replacements. Annual job openings are total job openings divided by the number of years in the projection period.

## Occupational Employment and Wage Statistics

- About This Dashboard
- OEWS Data
- Occupations by Group
- Occupations by Area
- Wage Type Comparison
- References

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### Mean Wage and Employment by Area

	Annual wage or salary	
	Farmers, Ranchers, and Other Agricultural Ma... 11-9013	First-Line Supervisors of Farming, Fishing, and... 45-1011
Mean Wage	\$100,000.00	\$50,000.00
Number of Employed	600	400
	Santa Maria-Santa Barbara MSA	Santa Maria-Santa Barbara MSA

**Area Name**  
Santa Maria-Santa Barbara MSA

**Major Groups (select before SOC)**  
Multiple values

**SOC**  
Multiple values

**Wage Type**  
Annual wage or salary

**Year**  
All

Note: A blank field in the data means there was either no data for a particular field or the data is suppressed. Data has been suppressed to ensure its confidentiality.

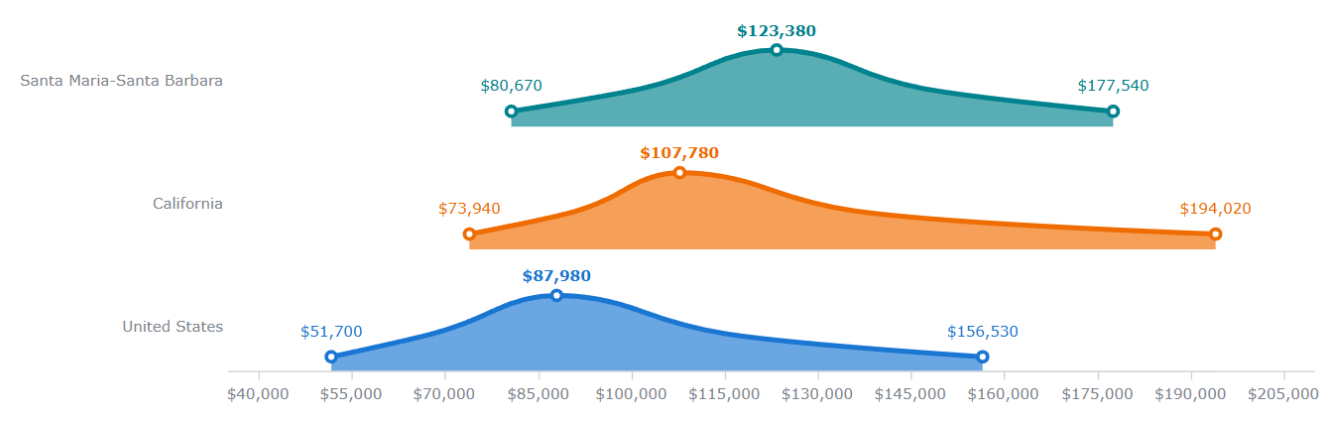
## Local Wages

**11-9013.00 - Farmers, Ranchers, and Other Agricultural Managers** ☀️ **Bright Outlook**

Wages for state: California Go

Wages near ZIP Code: 93455 Go

Annual Wages Hourly Wages



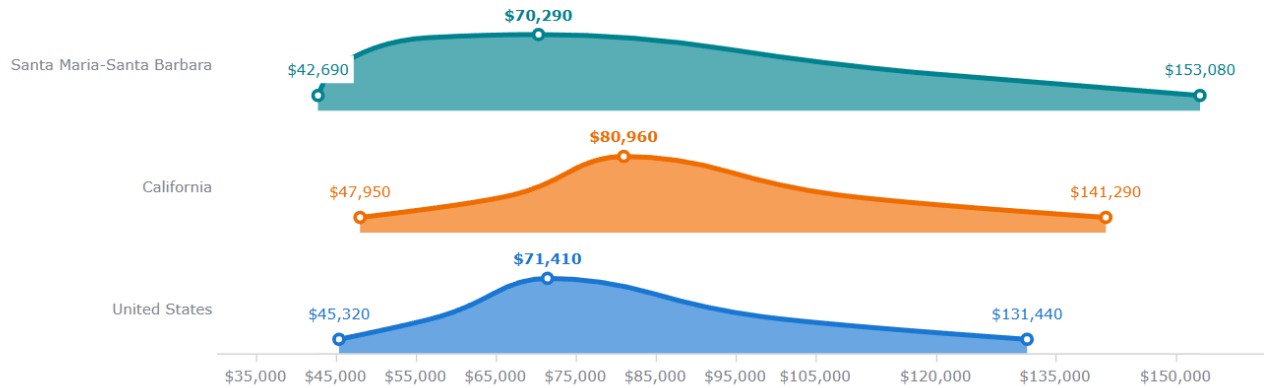
# Local Wages

19-1013.00 - [Soil and Plant Scientists](#)  **Bright Outlook**

Wages for state:

Wages near ZIP Code:

Annual Wages [Hourly Wages](#)



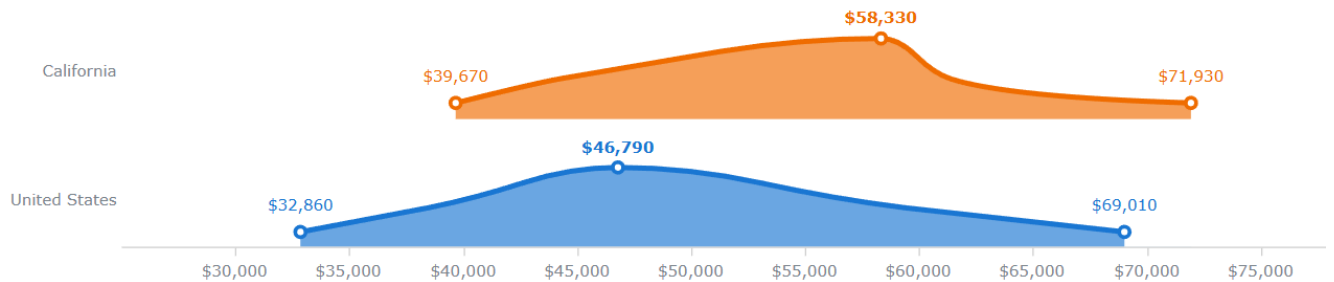
# Local Wages

19-4012.00 - [Agricultural Technicians](#)

Wages for state:

Wages near ZIP Code:

Annual Wages [Hourly Wages](#)



## In Santa Maria-Santa Barbara, CA:

No data available.

# Local Wages

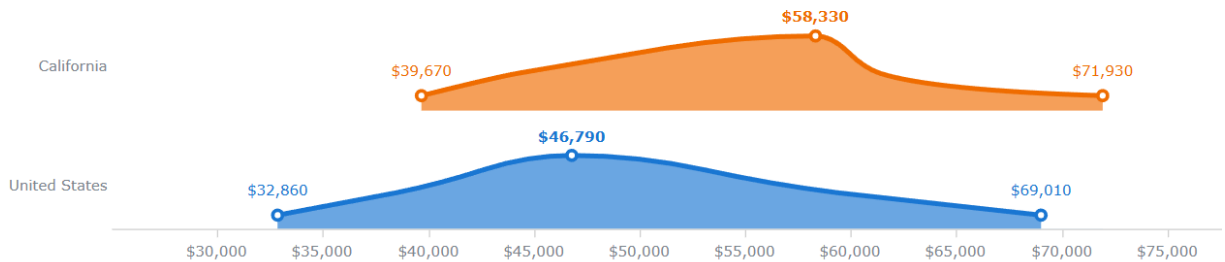
## 19-4012.01 - Precision Agriculture Technicians

Wage data collected from **Agricultural Technicians**.

Wages for state:

Wages near ZIP Code:

Annual Wages  Hourly Wages



### In Santa Maria-Santa Barbara, CA:

No data available.

# CTE OUTCOMES SURVEY DASHBOARD

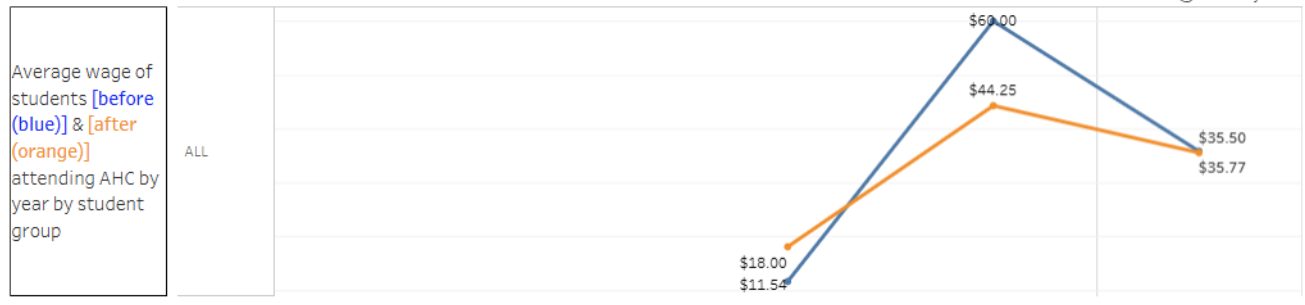
Information  Wages\_  Response Demo\_  Questions

## CTEOS Wage Survey

Program of Study for Award:

Student Group

- ALL
- Gender
- Ethnicity



Average wage of students [before (blue)] & [after (orange)] attending AHC by year by student group



**PERKINS V Core Indicators of Performance by 2-digit Vocational TOP Code**

**Summary Detail Report for 2025-2026 Fiscal Year Planning**

**ALLAN HANCOCK COLLEGE**

**01 Agriculture and Natural Resources - Cohort Yr: 2022- 2023**

	Core 1 Postsecondary Retention & Placement			Core 2 Earned Postsecondary Credential		
	Percent	Count	Total	Percent	Count	Total
Program Area Total	97.65	83	85	61.76	21	34
Female	100.00	39	39	55.56	10	18
Male	95.56	43	45	68.75	11	16
Black or African-American		0	0		0	0
American Indian/Alaskan Native		0	0		0	0
Asian	100.00	2	2		0	0
Filipino		0	0		0	0
Hispanic	98.00	49	50	72.73	16	22
Other Non-White		0	0		0	0
Multi-Ethnicity	100.00	4	4	50.00	1	2
Pacific Islander		0	0		0	0
White Non-Hispanic	96.43	27	28	40.00	4	10
Unknown	100.00	1	1		0	0
Individuals Preparing for Non-Traditional Fields	100.00	17	17	72.73	8	11
Out of Workforce Individuals		0	0		0	0
Individuals with Economically Disadvantaged Families	97.73	43	44	80.00	16	20
Single Parents	100.00	1	1		0	0
English Learners		0	0		0	0
Individuals with Disabilities	100.00	9	9	57.14	4	7
Technical Preparation		0	0		0	0
Homeless Individuals	100.00	2	2	50.00	1	2
Youth in Foster Care		0	0		0	0
Youth with Parent in Active Military		0	0		0	0
District	97.65	83	85	61.76	21	34
State	96.91	48,914	50,472	75.06	13,929	18,558



# PERKINS V Core Indicators of Performance by 2-digit Vocational TOP Code

## Summary Detail Report for 2025-2026 Fiscal Year Planning

Core 4 Employment			
Percent	Count	Total	
Program Area Total	87.50	28	32
Female	100.00	16	16
Male	75.00	12	16
Black or African-American		0	0
American Indian/Alaskan Native		0	0
Asian	100.00	1	1
Filipino		0	0
Hispanic	88.89	16	18
Other Non-White		0	0
Multi-Ethnicity	100.00	3	3
Pacific Islander		0	0
White Non-Hispanic	80.00	8	10
Unknown		0	0
Individuals Preparing for Non-Traditional Fields	100.00	6	6
Out of Workforce Individuals		0	0
Individuals with Economically Disadvantaged Families	83.33	10	12
Single Parents		0	0
English Learners		0	0
Individuals with Disabilities	80.00	4	5
Technical Preparation		0	0
Homeless Individuals		0	0
Youth in Foster Care		0	0
Youth with Parent in Active Military		0	0
District	87.50	28	32
State	82.37	11,427	13,873

Core 3 Non-traditional Program Enrollment			
Percent	Count	Total	
Program Area Total	21.78	22	101
Female	42.86	21	49
Male	1.96	1	51
Black or African-American		0	0
American Indian/Alaskan Native		0	0
Asian	33.33	1	3
Filipino		0	0
Hispanic	17.54	10	57
Other Non-White		0	0
Multi-Ethnicity	20.00	1	5
Pacific Islander		0	0
White Non-Hispanic	28.57	10	35
Unknown	0.00	0	1
Individuals Preparing for Non-Traditional Fields	21.78	22	101
Out of Workforce Individuals		0	0
Individuals with Economically Disadvantaged Families	16.67	9	54
Single Parents	100.00	1	1
English Learners		0	0
Individuals with Disabilities	10.00	1	10
Technical Preparation		0	0
Homeless Individuals	25.00	1	4
Youth in Foster Care	0.00	0	1
Youth with Parent in Active Military		0	0
District	21.78	22	101
State	48.70	30,886	63,423

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed.

Performance Rate Less Than Goal is Shaded

Core 1 - Postsecondary Retention & Placement: 95.51% Performance Goal - ( 2022- 2023)

Core 2 - Earned Postsecondary Credential: 84.02% Performance Goal - ( 2022- 2023)

Core 3 - Non-traditional Program Enrollment: Greater than 27.18% Participation - ( 2022- 2023)

Core 4 - Employment: 73.25% Performance Goal - ( 2022- 2023)

**b. How does the program address needs that are not met by similar programs?**

The Allan Hancock College Agriculture program remains the most varied and nimble program in the region. Driven by a robust and diverse Agriculture Advisory Committee, new and modified courses and programs regularly serve to adapt to changing and emerging student and industry needs. The connections with high schools, producers, agricultural agencies, and universities are powerful tools that keep this program at the forefront of relevancy.

**c. Does the employment, completion, and success data of students indicate program effectiveness and vitality? Please, explain.**

See the previously inserted Perkins College Core Indicator Information for specific data. In reviewing the Core Indicator Report, it is noted that in Core 1 Postsecondary Retention & Placement, Allan Hancock College is exceeding the 95.51% performance goal at 97.65%. The AHC Agriculture program falls well below the 84.02% performance goal for Core 2 Earned Postsecondary Credential at 61.76%. The AHC agriculture program sees a large number of students who transfer without earning an associate's degree from AHC, which likely skews this statistic. The recent addition of an Agricultural Science degree specifically designed to meet Cal Poly SLO transfer selection criteria may improve this number, as previously students elected not to take additional courses to complete the AHC degree if they were not required for transfer. Other possible explanations of this underperformance could be that students are taking longer than expected to complete their degree or they leave the college to enter the workforce without formally completing the program.

The AHC Agriculture program exceeds the Core 4 Employment performance goal of 73.25% by 14% at 87.50%, suggesting that students are successfully transitioning into the workforce. The most recent data available from AHC Institutional Effectiveness for the 2024-2025 academic year shows that overall program retention is 95% and overall program success is 86%. Non-traditional Program Enrollment (Core 3) falls over 5% below the participation target of 27.18%. This section of the Perkins report is difficult to assess because the statistics may be skewed by the number of males entering traditionally male-dominated pathways. According to the USDA and U.S. Bureau of Labor Statistics, both the agricultural production and agricultural support & inputs sectors are heavily male dominated, therefore men who enroll in the AHC Agriculture program are likely to not be identified as underrepresented.

**d. Has the program met the Title 5 requirements to review course prerequisites, and advisories within the prescribed cycle of every 2 year for CTE programs and every 5 years for all others?**

A comprehensive review of advisories and prerequisites for courses within the Agriculture program was conducted during the 2024-2025 Program Review as the core topic. Issues that were recognized during that process have all been effectively addressed.

**e. Have recommendations from the previous report been addressed?**

The recommendations from the previous annual report have not been implemented, largely due to a lack of funding to support program requests. The highest priority need for new classroom

space was partially addressed with the completion of instructional space in W-24. This instructional space, however, only accommodates 28 students, so it is not adequate for double lectures or larger lecture classes such as AG 150 and AG 152. Furthermore, although the program coordinator secured a quote and facilities approval plan for a skills lab space in W-22, the approval of the work has been stalled for unknown reasons and W-22 continues to function as an inadequate storage space for both the Agriculture and Veterinary Technology programs.

The goals that are yet to be achieved are those that require additional funding and support, such as:

- Improve and maintain the “living laboratory” student garden and fruit orchard to create an effective environment where agriculture students can participate in valuable experiential learning activities.
- Hire a classified farm technician
- Partially being addressed: Establish a dedicated laboratory and classroom space for agriculture courses
- Establish a dedicated space for an “ag center” where students can collaborate, study, and gather with peers, tutors, and faculty.
- Expand on Produce Safety program to develop food safety curriculum
- Expand on other curricula as recommended by the AHC Agriculture Advisory Committee
- Use a “farm to table” model to increase collaboration between AHC agriculture, viticulture, enology, nutrition and culinary programs
- Establish a “Week of Discovery” to adequately welcome and prepare incoming agriculture students and their families

Use the tables below to fill in **NEW** resources and planning initiatives that **do not apply directly to core topics**. *This section is only used if there are new planning initiatives and resources requested.*

Although these are not NEW resource requests, for continuity and ease of locating the program needs, they are being included again in this annual update.

**Continuing Program Planning Initiative**

**Title:** Enhancement of Student Instructional Space

**Planning years:** 2023-2024 to 2027-2028

**Description:**

The lack of dedicated instructional, storage, and meeting space for the agriculture program limits the ability of faculty to make the best use of time, knowledge, and student engagement. The following resources address the need to enhance the foundations of the agriculture program: improvement of the “living laboratory” student farm (vegetable garden, fruit orchard, greenhouse, and vineyard), establishment of a dedicated classroom and laboratory, and creation of a student hub/center for gathering to study, work on projects, and engage with agriculture program students and faculty.

**Resources:**

**Priority Level:** Low Medium **High**

**Resource Type:** Equipment **Staff** Faculty Supplies and Materials

**Description:** A full-time student farm technician would be responsible for maintaining all aspects of the student farm living laboratory. This would include planting, weeding, irrigation, germination, harvest, repairs, and supplies and equipment maintenance and inventory in the greenhouse, fruit orchard, vegetable garden, and occasionally in the vineyard. A dedicated staffing position will adequately manage the operational needs of the student farm. A farm technician is essential for the maintenance of this valuable living laboratory learning space. Students consistently experience improved learning outcomes when they have access to a well-maintained farm lab space. At the very minimum, a professional irrigation contractor should be hired to modernize and repair the irrigation in all areas of the student farm: the fruit orchard, the community garden space, and the greenhouse.

**Resources:**

**Priority Level:** Low **Medium** High

**Resource Type:** **Equipment Staff** Faculty **Supplies and Materials**

**Description:** Establishment of formal, seasonal agricultural production enterprise projects on the AHC student farm to be managed by a student worker dedicated to assisting the Student Farm Technician. Supplies to include, but not limited to: potting mix, soil amendments, seeds, plants, irrigation supplies, tools, gloves, compost and BEAM building supplies, flags, plant tags, organic pest management materials, applicator equipment, and pest identification tools.

**Resources:**

**Priority Level:** Low Medium **High**

**Resource Type:** **Equipment** Staff Faculty **Supplies and Materials**

**Description:** Establish a dedicated laboratory, classroom, storage, and meeting space for agriculture courses and students. An area that can be designated as an “ag center” on campus would serve to alleviate scheduling conflicts and issues finding lecture/lab space. The current system finds the agriculture courses interfering with the classroom and lab space needs of the other programs in the department and prevents agriculture students from having an identified place to work, study, attend lectures and labs, and gather with peers, tutors, and faculty. An agriculture program “center” should include at least one dedicated wet laboratory complete with a full set of microscopes, storage capacity, and the many tools and supplies needed for plant science, plant pathology, entomology, weed science, animal science, soil science, plant propagation, horticulture, integrated pest management, and fruit science. This includes, but is not limited to: a fume hood, incubator, refrigerator/freezer, petri dishes, agar, gas chromatograph mass spectrometer. Additionally, the center should include at least one lecture classroom with all standard classroom technology. A study and meeting space is also essential for student collaboration, studying, tutoring, peer engagement, club meetings, and faculty interaction with students.

**Continuing Program Planning Initiative**

<b>Title:</b>	Industry-relevant and Transfer-preparation Curriculum Development
<b>Planning years:</b>	2023-2024 to 2026-2027

**Description:**

The agriculture industry is constantly on the forefront of emerging technologies and adoption of new practices, techniques, and approaches to adapt to changing consumer demands, increasing laws and regulations, advanced technologies, natural resource conservation, and the health and safety of the consumer. Due to these qualities of the industry, higher education technical training and academic preparation must be regularly updated to adequately prepare students for success. The following resources will serve to address curriculum development needs to maintain the agriculture program at the leading edge of agricultural advancements.

**Resources:**

**Priority Level:** Low Medium High

**Resource Type:** Equipment Staff Faculty Supplies and Materials

**Description:** Complete the development of the precision ag program and consider integration or alignment with the AHC industrial technology program to establish ag machining, engineering, geospatial technology, and automation curriculum. With rapidly emerging advanced technologies to support agriculture production, such as engineering, manufacturing, operating, diagnosing, and repairing autonomous and precision equipment, there is a significant workforce gap for skilled technical employees. The completion of these programs will require faculty research, industry collaboration, curriculum development, and the purchase of supplies and equipment required for adequate instruction. Student drones, GIS/GPS software and devices, water/weather/soil moisture/evapotranspiration monitors, and related software will all be required for the effective implementation of the precision agriculture program. Equipment and supplies needed for revitalizing the current AHC Mechanized Agriculture course include: woodworking, metal, concrete, electrical, and plumbing tools and equipment for broad workforce training, including table saw, drill press, miter saw, and concrete mixer.

**Resources:**

**Priority Level:** Low Medium High

**Resource Type:** Equipment Staff Faculty Supplies and Materials

**Description:** Expand on the produce safety program that was initiated through a collaboration with Cal Poly State University, funded by a USDA FSOP grant to develop a comprehensive food safety curriculum. Under federal food safety regulations, all farms that produce commodities covered under the FSMA Produce Safety Rule are required to have at least one employee trained via a curriculum that is FDA approved for produce safety. In order to meet this significant industry need and provide students with preparation for this career pathway, a formal produce safety course and food safety certificate program are recommended. The addition of this program would further serve to prepare the AHC student farm for expansion of produce sales on a larger scale. Equipment and supplies will be required for microbial detection on plant tissues and in soil and water samples along with pH analysis, cleaning and sanitizing of all produce contact tools and surfaces. Faculty time for research and curriculum development will also be necessary.

**Resources:**

**Priority Level:** Low Medium High

**Resource Type:** Equipment Staff Faculty Supplies and Materials

**Description:** Per the recommendations of the AHC Agriculture Program Advisory Committee, exploration of new curricular concepts should include: agriculture laws & regulations, natural resource management, certified crop adviser preparation, greenhouse technician and grower training, regenerative/sustainable/organic production preparation, and agriculture biotechnology. Faculty time for research and curriculum development will serve to identify industry needs and university articulation potential. Equipment and supplies required will be determined based on the content of the recommended courses.

**Continuing Program Planning Initiative**

**Title:** Field to Table Interdisciplinary Collaborations

**Planning years:** 2024-2025 to 2026-2027

**Description:**

Given the significant shift in the agriculture industry toward increasing small, diversified farming operations and USDA support of the “farm to table” model that uses an interdisciplinary, cross-industry approach to close the gap in the food system between producer and consumer, it is valuable to expose students to the many ways in which such collaborations can lead to successful career opportunities. As such, the continued support of the AHC Field to Table Week of Welcome event and an expansion of collaborative food systems projects between the Agriculture, Viticulture & Enology, Food Science & Nutrition, and Culinary Arts & Management programs is an essential component of a successful agriculture program at AHC. Additional partnerships with the AHC Fashion Studies program for the production and study of natural fibers and plant-based dyes will provide a cross-disciplinary and relevant opportunity for students in the Agriculture program.

**Resources:**

**Priority Level:** Low Medium High

**Resource Type:** Equipment Staff Faculty Supplies and Materials

**Quantity:** n/a

**Per Item Price:** unknown      **Price with taxes/shipping, etc:**

**Description:** Farm to Table interdisciplinary collaborations bring together students and faculty from the Agriculture, Viticulture & Enology, Culinary Arts & Management, and Food Science & Nutrition programs to plant, maintain, harvest, prepare, cook, and distribute student-grown produce from the AHC student farm. This program is in its infancy and has the potential to serve the broader AHC community with farm-fresh, student-grown, organic produce while providing involved students with industry-relevant collaborative experiences. To impart effective and impactful grassroots campus food systems change, this program will require funding to support classified staff and faculty, student farm equipment and supplies that include but are not limited to a modernized greenhouse for soilless and various media fruit, vegetable, and flower production, automated greenhouse controls, computerized irrigation, temperature management along with related and required computer programs, and all potting, irrigation, fertilizer, and pest management supplies.

**Resources:**

**Priority Level:** Low Medium High

**Resource Type:** Equipment Staff Faculty Supplies and Materials

**Quantity:** n/a

**Per Item Price:** \$10,000      **Price with taxes/shipping, etc:**

**Description:** The Field to Table Week of Welcome event has been a successful event since its inception in 2019. Incoming students in any of the “Field to Table” disciplines (agriculture, viticulture & enology, culinary arts & management, or food science & nutrition), are encouraged to join a collaboration among these programs through an intimate “Week of Welcome” experience. This 2 to 3-day event offers an introduction to the campus, program resources such as the student farm, vineyard, winery, culinary kitchen, and food science lab; the program coordinators, full-time faculty, and part-time faculty; and student services counselors. This initial welcome introduces students to the resources they will need to ensure success at AHC and beyond, including a student panel of program alumni. The support offered by the Field to Table Week of Welcome is holistic in its approach to acknowledge and encourage the whole person – academic, social, emotional, and cultural values. A relevant Field to Table industry tour day is a highlight of the event, connecting students in these disciplines with local businesses participating in sustainable food systems. This valuable event provides incoming students in any of the connected Field to Table disciplines with the formative opportunity to prepare for entrance into AHC and connect with fellow incoming students. This event should continue to be hosted on an annual basis.

**Resource Requests:** Please use the Resource Request Excel template located on the Program Review web page to enter resource requests for equipment, supplies, staffing, facilities, and misc. resources needed. Send completed excel document along with completed program view core topic for signature.

The screenshot shows an Excel spreadsheet with a table for resource requests. A text box in the upper left corner provides instructions: "Enter equipment requests below. Equipment is defined as having useful life of more than one year AND a purchase price of more than \$200 each including tax. This includes all items that are part of the initial purchase." The table has the following columns: Dept, Program, Source, Year, Initiative (Objective) Reference, Resource Need, and Requested Item(s) Please include per item. The first row of data shows: English, English Rhetoric, Yearly Planning and Core, 2022-2023, ER OBJ - 2, Equipment, and video cameras \$600 each. The spreadsheet also features a navigation bar at the bottom with tabs for EQUIPMENT, SUPPLIES, STAFFING, TECHNOLOGY, and FACILITIES.

Dept	Program	Source	Year	Initiative (Objective) Reference	Resource Need	Requested Item(s) Please include per item
English	English Rhetoric	Yearly Planning and Core	2022-2023	ER OBJ - 2	Equipment	video cameras \$600 each

Resources requests have been added to the Resource Request Excel template and will be submitted with the Program Review documents.

# **Area of Focus Discussion Template**

## **EDUCATION AND INDUSTRY PARTNERSHIPS**

**Education and Industry Partnerships** – review relationships with four-year institutions including preparation for transfer and changes in major requirements assess employment as well as review employment and the needs of employers and regional partners. Sample activities include the following:

**Possible topics:**

- Review academic transfers and associate degree for transfer alignments.
- Review articulation agreements.
- Review C-ID (course identification system) modifications.
- Integrate advisory committee recommendations and regional training needs.
- Review career and technical education (CTE) labor market information and trends.
- Explore collaborations, internships and externships, and cooperative work experience opportunities.
- CTE unit completion goals in the Student Centered Funding Formula and CCCCCO Vision for Success.

### **1. What data were analyzed and what were the main conclusions?**

#### **University Partnerships**

##### **Agricultural Science Bachelor's Degree and Teaching Credential Requirements**

The Agriculture program coordinator became aware of an important requirement for students who complete a bachelor's degree and wish to apply to enter an agriculture teacher credentialing program. Prior to acceptance into an ag teacher program, students must complete 3000 total hours of work in the agricultural industry. This information is provided to students who enter the university as freshmen in an ag teaching major, but for transfer students, this often comes as a shock and can be a significant barrier to qualifying for a credential program after completion of a bachelor's degree. To address this challenge, the Agriculture program coordinator met with the Cal Poly State University Coordinator for the Agriculture Single Subject and Ag Specialist Credential programs. Through this collaboration, it was discovered that students at Allan Hancock College who wish to pursue an Agricultural Education major with the intention of becoming high school agriculture teachers, should begin accruing those required hours and documenting them. Many examples of ways to satisfy this requirement were provided and this information will position the AHC Agriculture program to improve student preparedness for this popular path of study. This information will also be presented to the AHC Counseling Department in Fall 2026.

##### **Cal Poly State University Agricultural Education and Communication Advisory Council**

The AHC Agriculture program coordinator was recently selected to serve on the advisory council for the Cal Poly Agricultural Education and Communication Department under the College of Agriculture, Food and Environmental Sciences (CAFES). This department includes majors that many AHC agriculture students pursue, such as Agricultural Science, Agricultural

Education, and Agricultural Communication. This crucial connection will improve transferability and preparedness for AHC agriculture students.

### **Cal Poly State University Course Learning Outcomes and Objectives**

As part of the AHC Agriculture program learning assessment project, a careful evaluation of program and course learning outcomes and objectives has been initiated. During this process, it has become evident that the C-ID-prescribed learning objectives do not entirely align with the historic course student learning outcomes (SLOs). This prompted an inquiry into the alignment of course objectives with the expectations of the universities to which those courses articulate. The Cal Poly State University San Luis Obispo Articulation Officer provided the course learning outcomes and objectives for each of the courses that articulate from Allan Hancock College into any of the CAFES majors. This information will guide a year-long evaluation of those AHC courses where course modifications will be made when necessary to ensure that students who complete an articulated course at AHC or via CCAP will have been exposed to comparable content and academic rigor that they would have received had they taken those courses at a partner university.

### **CSU Monterey Bay**

A strong relationship has been established between the Professor and Coordinator of the CSU Monterey Bay Agricultural Plant & Soil Science Program. Dr. Dundore-Arias has even been a guest presenter in two of the AHC agriculture courses, further solidifying a viable pathway for students to transfer into this remarkable program centered in the heart of the Salinas Valley “salad bowl of the world”. Opportunities for scholarships and invitations to university events are regularly extended to AHC agriculture students via the relationship between CSU Monterey Bay and the AHC Agriculture program coordinator.

### **Fresno State University**

A long-standing relationship between the Fresno State University Animal Science and Agriculture Education coordinator and the AHC agriculture coordinator continues to serve as a valuable connection for the AHC agriculture students wishing to transfer into this robust program positioned in the San Joaquin Valley – a global leader in crop and livestock production.

### **Chico State University**

As the Chico State University Agriculture programs continue to evolve and flourish, it has become important for the AHC Agriculture program to enhance its relationship with the university as it offers many valuable opportunities for AHC transfer students. The AHC Agriculture program coordinator will be engaging with a key professor from Chico State University at a week-long professional development event this June. This connection will further support AHC students who might benefit from knowing the program options and opportunities provided at Chico State University.

### **Industry Partnerships**

#### **AHC Agriculture Advisory Committee**

The AHC Agriculture program enjoys support and engagement from a robust and diverse community of industry partners. During the Fall 2025 Advisory Committee Meeting, the

attendees evaluated the sectors of the industry that are represented on the committee and identified gaps in membership that should be addressed. Noted gaps included representation from the laboratory analysis sector and the heavy equipment/machine sector. A connection was made by one of the current committee members to Primus Labs, a global leader in agricultural laboratory analyses that is headquartered in Santa Maria. Subsequently, a new member has been selected from Primus Labs to serve on the AHC Agriculture Advisory Committee. Other members of the committee are working to establish a connection with Cal Coast Machinery.

Another notable gap is representation from large vegetable and/or specialty crop producers. While there were previous members of the committee representing this sector, they are no longer actively participating and it was suggested by some members of the committee that this gap needs to be filled. Recently shared recommendations for outreach include Betteravia Farms, Innovative Produce, and Rancho Laguna Farms. The AHC Agriculture program coordinator is implementing an outreach plan to request participation from a member of each of those large farming operations prior to the Fall 2026 Advisory Committee meeting.

Furthermore, during the Fall 2025 Advisory Committee meeting, industry partners were provided with copies of the Program Learning Outcomes (PLOs) for each of the degrees in the Agriculture program. Industry partners identified outcomes that they would consider best assessed combined with other related outcomes and they also ranked each PLO based on importance they considered in employees they would like to hire. The results of those conversations will guide future PLO and SLO modifications and are documented in the following 3 illustrations:

**AGRICULTURAL PLANT SCIENCE - ASSOCIATE IN SCIENCE FOR TRANSFER** Active

[View Proposal History](#) [Reports](#) [Form Properties](#)

### Program Learning Outcomes

Add each program learning outcome separately. If you need help with this section, please reach out to your Curriculum Specialist

[+ Add](#)

- 1 Understand the importance, value, characteristics and physiology of higher plants.
- 2 Assess and differentiate effects of agricultural activities in plant cropping systems, while describing alternative practices in order to make sound agricultural decisions that ensure the quality and success of a crop.
- 3 Demonstrate comprehension of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully raise horticultural crops.
- 4 Apply current agricultural industry standards in the agricultural sciences or related fields.
- 5 Employ effective business, sales, marketing, and communication skills when presented with an agribusiness or farm management situation.
- 6 Analyze current market trends, costs, and inputs, to provide sustainable solutions in farming systems.

### Program Learning Outcomes

Add each program learning outcome separately. If you need help with this section, please reach out to your Curriculum Specialist

+ Add

- 3 Explain how economic principles relate to commodity marketing and sales in agriculture. Analyze agricultural production, food processing and retailing; and their influence on food marketing, considering factors that influence consumer choice.
- 4 Recognize and describe agricultural business organizational structures, functions of management and how they relate to the agribusiness organization. Identify the role of the agricultural manager and recognize various styles of leadership.
- 2 Develop an awareness of the basic laws, regulations, and regulatory agencies that interact with the agriculture community. Explain the process and rationality for government regulations impacting businesses and the effect of regulations on market decisions.
- 1 Understand theoretical concepts and principles of economics applied to agricultural sciences, including how markets work, characteristics of divergent market structures, and the major determinants of supply and demand interaction. Demonstrate the ability to apply the appropriate monetary and fiscal policies to different phases of the business cycle.
- 5 Demonstrate comprehension of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully raise horticultural crops.

### Program Learning Outcomes

Add each program learning outcome separately. If you need help with this section, please reach out to your Curriculum Specialist

+ Add

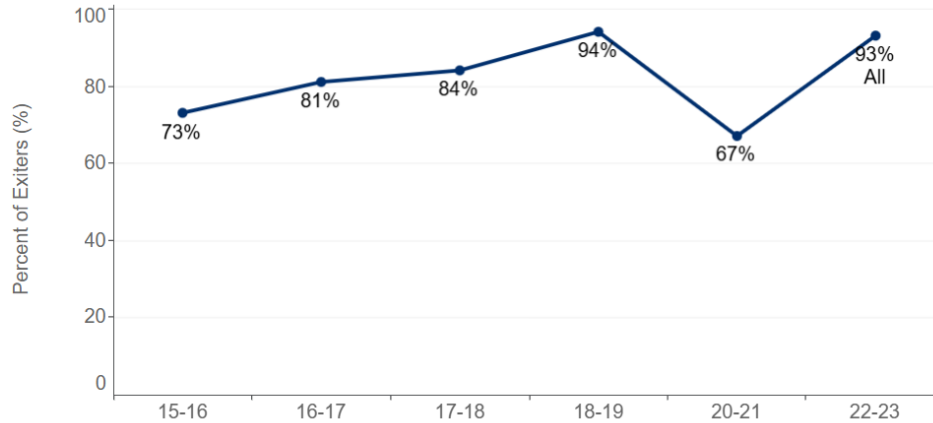
- 2 apply current agricultural industry standards, laws and regulations in the agricultural sciences or related fields.
- 1 demonstrate knowledge of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully produce agricultural crops.
- 1 identify common insect and disease pests and use knowledge of pest life cycles to recommend pest prevention and management plans. **add plant health here**
- 4 employ effective business skills using industry analysis, market trends, business plans and other standard agribusiness techniques, when presented with a farm or ranch management situation.
- 3 assess and differentiate effects of agricultural activities in plant and cropping systems, while describing alternative practices in order to make sound agricultural decisions that ensure the quality and success of a crop.
- 3 demonstrate an understanding of crop plant biological functions and their application to successful commodity production.
- 3 demonstrate basic worker safety practices.

## Internships and Work Experience

The most current employment data available through the California Community College Chancellor's Office Data Vista site (2022-2023) indicates that 93% of survey respondents who began their academic journey in Agriculture, Water, and Environmental Technologies at Allan Hancock College are working in a job related to their area of study:

### Job Closely Related to Field of Study

All General Admit Students in Agriculture, Water and Environmental Technologies at Allan Hancock College disaggregated by Overall  
Percentage of respondents to the CTEOS question who exited all postsecondary and reported working in a job closely related to their field of study in selected timeframe



**Source:** Chancellor's Office Management Information System, CTE Outcomes Survey, National Student Clearinghouse, CSU/UC Cohort Match

**Notes:** Employment and earnings metrics are only calculated and displayed for students who are no longer enrolled in any postsecondary institution. This metric is based on self-reported CTE Outcome Survey (CTEOS) data and relies on student responses to survey questions. Therefore, the data is not available for the two latest years.

There have been many local internship and job opportunities that reach AHC agriculture students via program-industry relationships and these have often translated into full-time employment. Anecdotally, students who have completed an AHC agricultural pathway report excellent job-finding conditions and regularly reach out to offer current students internship opportunities in their place of work.

Additionally, myriad industry partners collaborate with the AHC Agriculture program coordinator to promote internship and job openings among the student population. Frequently, those positions are filled by current AHC agriculture students who benefit from valuable paid work experiences.

## 2. Based on the data analysis and looking through a lens of equity, what do you perceive as *challenges* with student success or access in your area of focus?

In reviewing the results of the Education and Industry Partnerships area of focus, the following challenges are identified:

- a. Lack of early awareness of credential requirements for students transferring into Agricultural Education pathways
- b. Unequal access to industry experience and social capital for those students lacking family connections or existing professional agricultural backgrounds

- c. Potential barriers to transfer preparedness if course and program learning outcomes do not adequately align with university expectations for content and rigor
- d. Limited access to hands-on instructional space and modern industry technologies/equipment needed to effectively prepare students to satisfy workforce needs
- e. Potential barriers to workforce preparedness if instructional focus does not align with industry priorities

**3. What are your plans for change or *innovation*?**

- a. Maintaining the established connection with the university Agriculture Education directors will keep the AHC Agriculture program coordinator informed of work hour and other requirements that are not expressly written in transfer selection criteria documents. This current and relevant information will also be presented to the AHC Counseling program and the University Transfer Center via a “blueprint handout” so that advance preparation can be made by students planning to transfer to complete a bachelor's degree and subsequent agriculture teaching credential.
- b. The expansion of the AHC Agriculture Advisory Committee to fill industry sector gaps can serve to increase internship and work placement opportunities for local students.
- c. A careful review of all course and program learning outcomes will serve to ensure that AHC courses that articulate to universities are adequately covering the expected content to the level of rigor necessary for transfer students to attain. Where a misalignment is found, modifications will be launched to correct the issues identified.
- d. Partnerships with the Santa Maria Joint Union High School District CTE Center for AHC courses outside of the bell schedule could provide students with access to equipment and shop space that is not currently available on campus. Additionally, exploration of in-course experiences that connect with industry equipment on farm and lab sites can be considered where industry partners are willing to collaborate.
- e. Evaluation and updates of current Program Learning Outcomes and their related course Student Learning Outcomes and Learning Objectives will ensure that content covered in AHC agriculture courses aligns with documented industry priorities.

**4. How will you *measure* the results of your plans to determine if they are successful?**

- a. Check-ins with AHC students who are majoring in Agricultural Science with the intention of transferring to complete a degree and credentialing program in Ag Education will afford the AHC Agriculture program coordinator the opportunity to track the number of students who have been made aware of the work hours requirement. These check-ins will also allow the program coordinator to assess the most effective means of communicating this information to incoming transfer-bound students.
- b. The number and diversity of new members added to the AHC Agriculture Advisory Committee to fill industry sector gaps.

- c. Modified course Student and Program Learning Outcomes for all courses that articulate to universities will be launched to align course content, objectives, and outcomes where a misalignment has been identified.
- d. Measure of the number and size of added tangible workspace, lab, and classroom capacities via new construction or local partnerships.
- e. Modified program course Student and Program Learning Outcomes for all courses required for AHC agriculture degree programs will be launched to align course content, objectives, and outcomes with documented industry priorities where misalignment has been identified.

**Validation for Program Planning Process: If you have chosen to do the Validation this year, please explain your process and the findings.**

**Not applicable for 2025-2026**

1. Who have you identified to validate your findings? (Could include Guided Pathway Success Teams, Advisory Committee Members, related faculty, industry partners or higher education partners)
2. Are there specific recommendations regarding the core topic responses from the validation team?

Based on the narratives for the prompts above, what are some program planning initiatives and resources needed for the upcoming years? Use the tables below to fill in **NEW** resources and planning initiatives. *This section is only used if there are new planning initiatives and resources requested that pertain to the Core Topic only.*

All new and ongoing resource requests are found in the tables in the Agriculture Program Annual Update, as the needs for the Core Topic are not separate from general program requests.

**Resource Requests: Please use the Resource Request Excel template located on the Program Review web page to enter resource requests for equipment, supplies, staffing, facilities, and misc. resources needed. Send completed excel document along with completed program view core topic for signature.**

Resource requests have been added to the Resource Request Excel template and will be submitted with the Program Review documents.

Enter equipment requests below. Equipment is defined as having useful life of more than one year AND a purchase price of more than \$200 each including tax. This includes all items that are part of the initial purchase.

### EQUIPMENT NEEDS

Dept	Program	Source	Year	Initiative (Objective) Reference	Resource Need	Requested Item(s) Please include per item
English	English Rhetoric	Yearly Planning and Core	2022-2023	ER OBJ - 2	Equipment	~ /ideo cameras \$600 each



# Soil and Plant Scientists in 2 California Counties

# Contents

What is Lightcast Data? .....	1
Report Parameters .....	2
Executive Summary .....	3
Jobs .....	4
Compensation .....	6
Job Posting Activity .....	7
Demographics .....	11
Occupational Programs .....	14
Appendix A .....	15

## What is Lightcast Data?

Lightcast data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumé, and job postings to give you a complete view of the workforce.

Lightcast data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.



## Report Parameters

### 1 Occupation

19-1013 Soil and Plant Scientists

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### 2 Counties

6079 San Luis Obispo County, CA

6083 Santa Barbara County, CA

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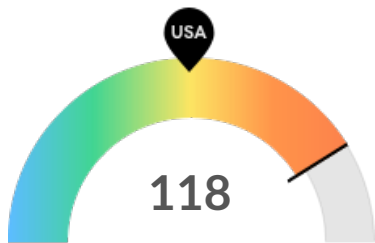
### Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

The information in this report pertains to the chosen occupation and geographical areas.

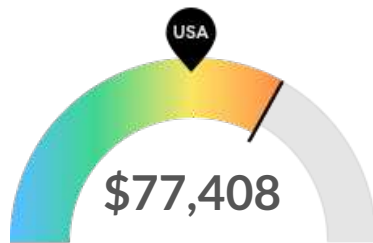
## Executive Summary

### Aggressive Job Posting Demand Over a Deep Supply of Regional Jobs



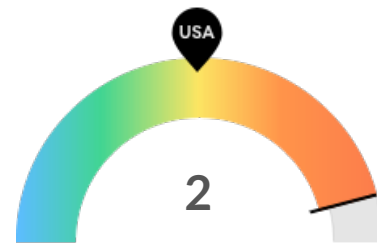
**Jobs (2023)**

Your area is a hotspot for this kind of job. The national average for an area this size is 47\* employees, while there are 118 here.



**Compensation**

Earnings are high in your area. The national median salary for Soil and Plant Scientists is \$66,134, compared to \$77,408 here.



**Job Posting Demand**

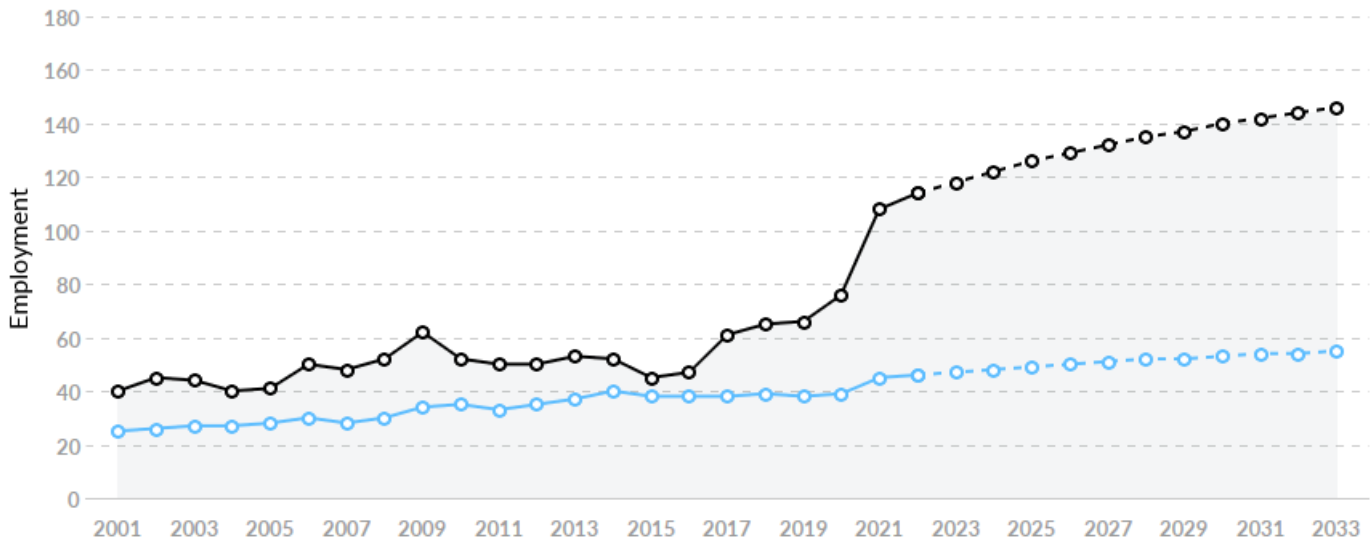
Job posting activity is high in your area. The national average for an area this size is 0\* job postings/mo, while there are 2 here.

\*National average values are derived by taking the national value for Soil and Plant Scientists and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

# Jobs

## Regional Employment Is Higher Than the National Average

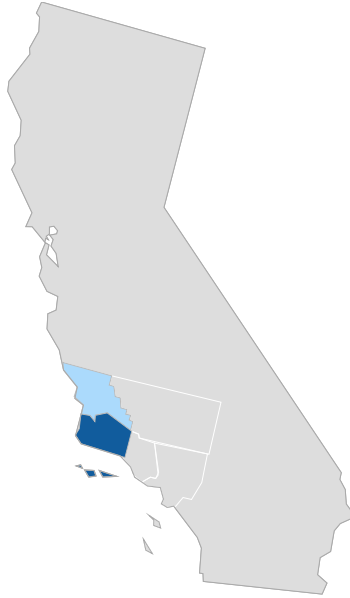
An average area of this size typically has 47\* jobs, while there are 118 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.



Region	2023 Jobs	2033 Jobs	Change	% Change
● 2 California Counties	118	146	28	23.8%
● National Average	47	55	7	15.9%

\*National average values are derived by taking the national value for Soil and Plant Scientists and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

## Regional Breakdown



County	2023 Jobs
Santa Barbara County, CA	100
San Luis Obispo County, CA	18

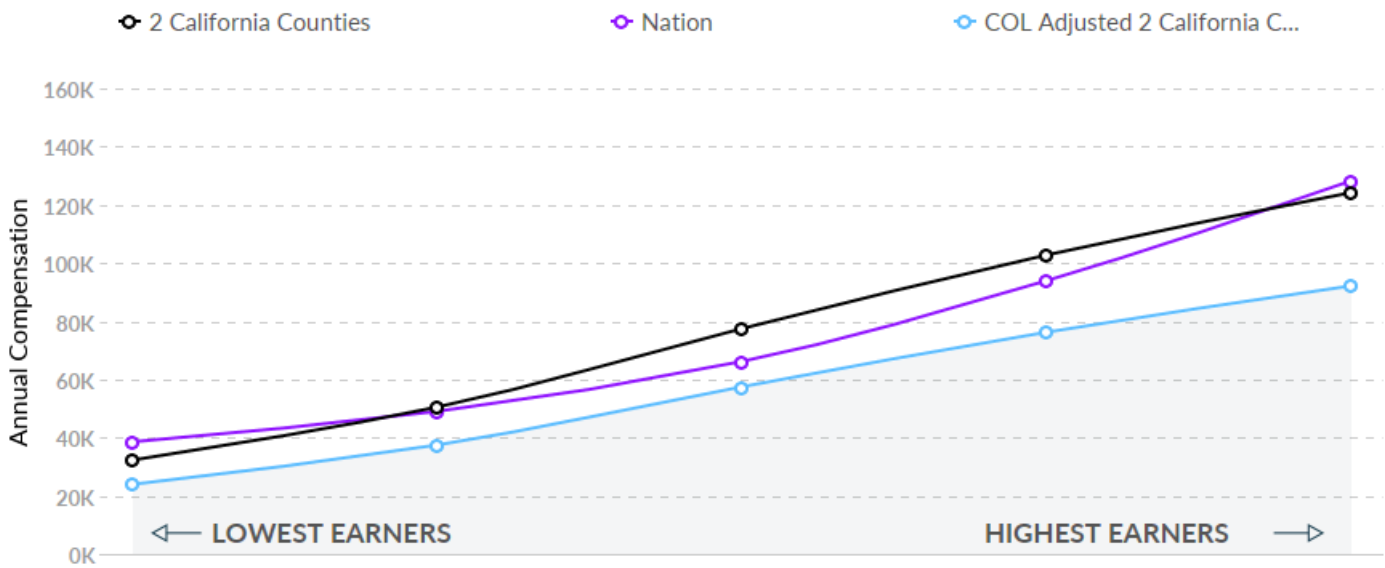
## Most Jobs are Found in the Crop Production Industry Sector



# Compensation

## Regional Compensation Is 17% Higher Than National Compensation

For Soil and Plant Scientists, the 2021 median wage in your area is \$77,408, while the national median wage is \$66,134.



# Job Posting Activity



**9 Unique Job Postings**

The number of unique postings for this job from Jan 2023 to Jun 2023.



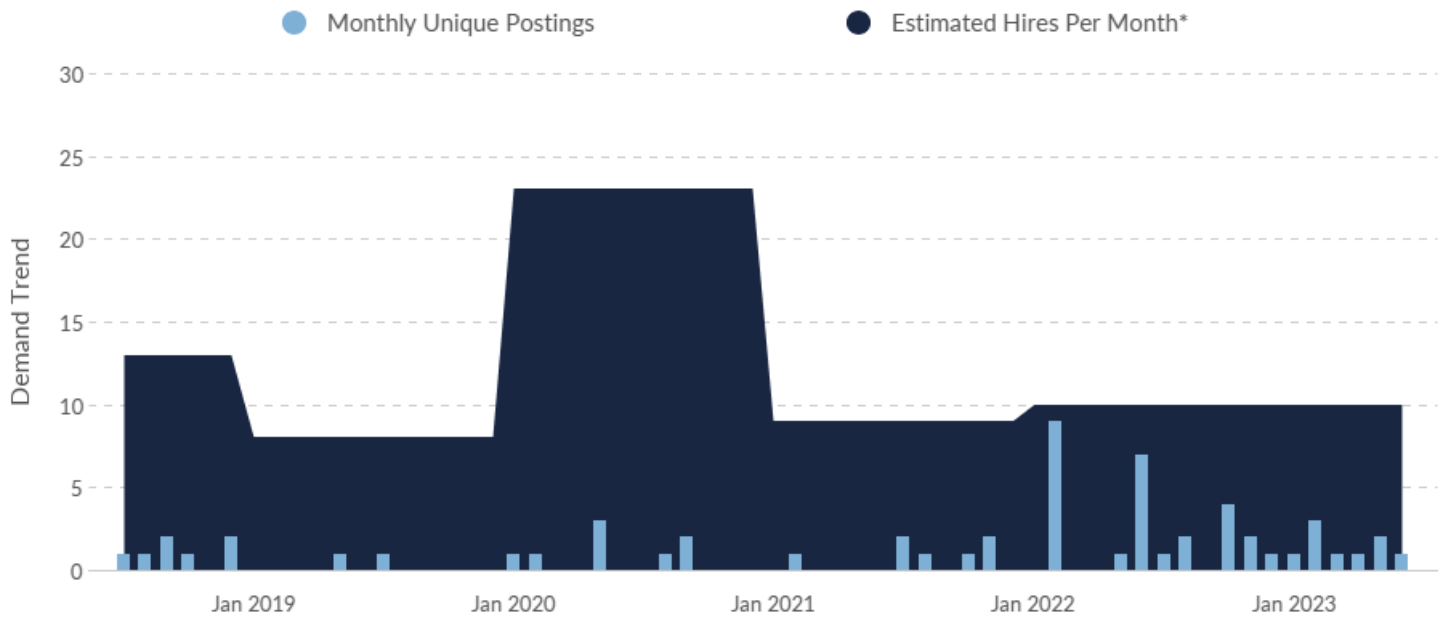
**7 Employers Competing**

All employers in the region who posted for this job from Jan 2023 to Jun 2023.



**21 Day Median Duration**

Posting duration is 12 days shorter than what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2023 - Jun 2023)	Avg Monthly Hires (Jan 2023 - Jun 2023)
Soil and Plant Scientists	2	10

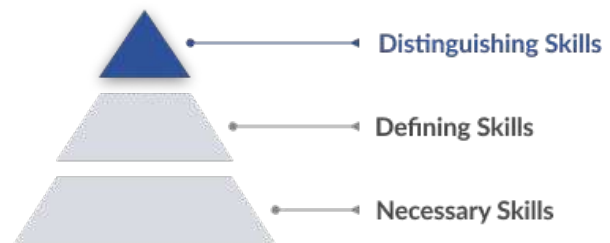
\*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Lightcast hires are calculated using a combination of Lightcast jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
Ball Horticultural Company	2
University of California	2
Geosolutions	1
ManTech	1
Reiter Affiliated Companies	1
Stantec	1

Top Job Titles	Unique Postings
Plant Breeders	3
Botanists	2
Environmental Managers	2
Soils Technicians	1

## Top Distinguishing Skills by Demand

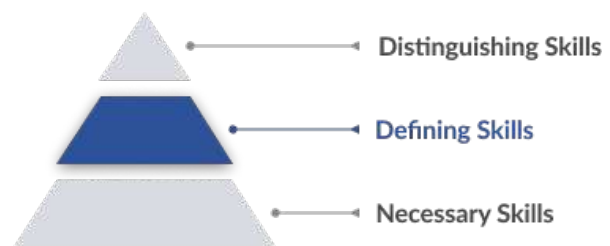
An occupation's Distinguishing Skills are the advanced skills that are called for occasionally. An employee with these skills is likely more specialized and able to differentiate themselves from others in the same role.



Skill	Salary Boosting	Job Postings Requesting
Crop Management		0
Certified Crop Advisor		0

## Top Defining Skills by Demand

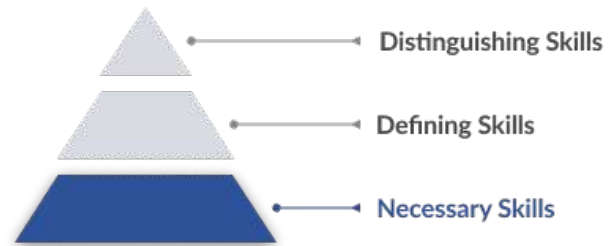
An occupation's Defining Skills represent the day-to-day tasks and responsibilities of the job. An employee needs these skills to qualify for and perform successfully in this occupation.



Skill	Salary Boosting	Job Postings Requesting
Soil Science	✘	3
Agronomy	✘	1
Valid Driver's License	✘	1
Agriculture	✘	1

## Top Necessary Skills by Demand

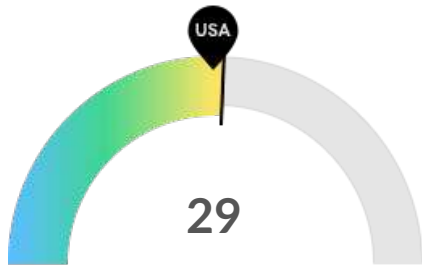
An occupation's Necessary Skills are the specialized skills required for that job and relevant across other similar jobs. An employee needs these skills as building blocks to perform the more complex Defining Skills.



Skill	Salary Boosting	Job Postings Requesting
Biology	✘	2
Botany	✘	2
Marketing	✘	2
Fertilizers	✘	1
Data Collection	✘	1
Environmental Science	✘	1
Irrigation (Landscaping And Agriculture)	✘	1
Plant Science	✘	0
Data Analysis	✘	0
Crop Production	✘	0

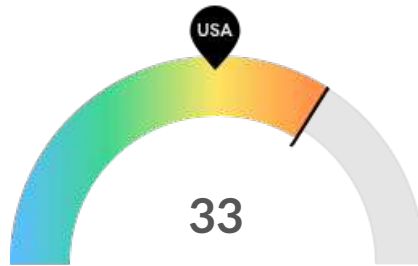
## Demographics

### Retirement Risk Is About Average, While Overall Diversity Is High



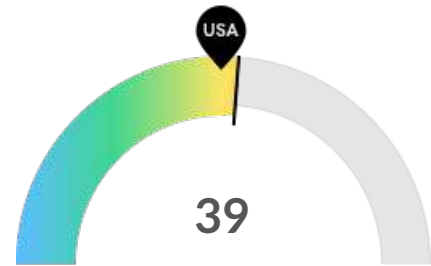
**Retiring Soon**

Retirement risk is about average in your area. The national average for an area this size is 28\* employees 55 or older, while there are 29 here.



**Racial Diversity**

Racial diversity is high in your area. The national average for an area this size is 20\* racially diverse employees, while there are 33 here.

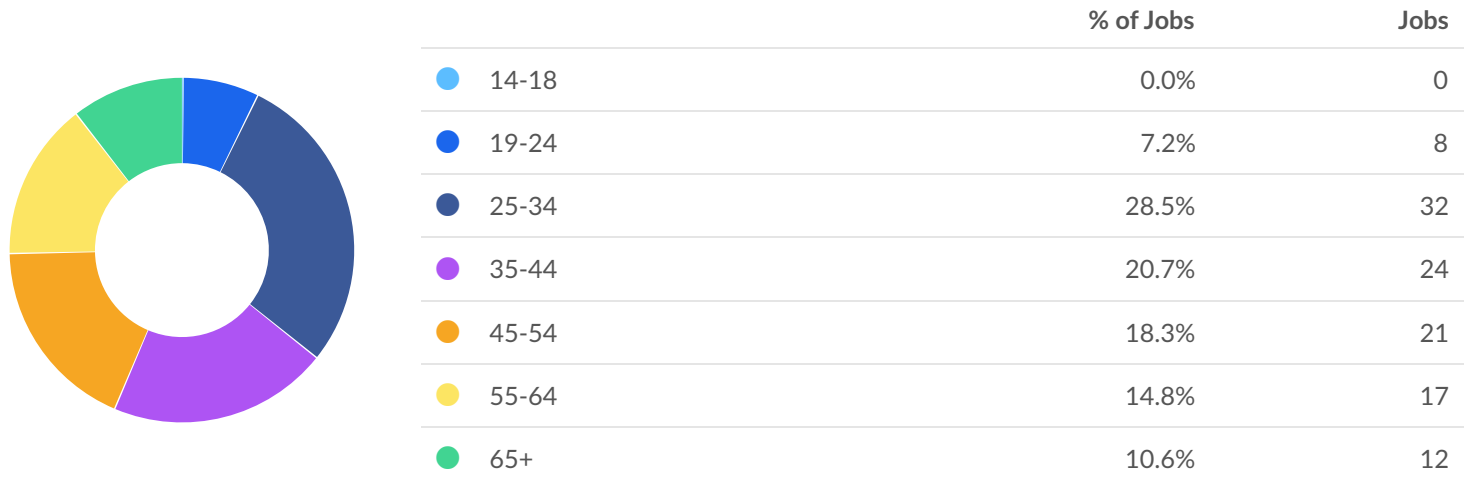


**Gender Diversity**

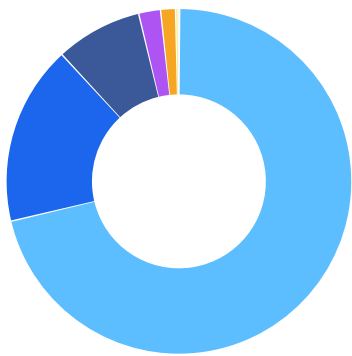
Gender diversity is about average in your area. The national average for an area this size is 36\* female employees, while there are 39 here.

\*National average values are derived by taking the national value for Soil and Plant Scientists and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

## Occupation Age Breakdown

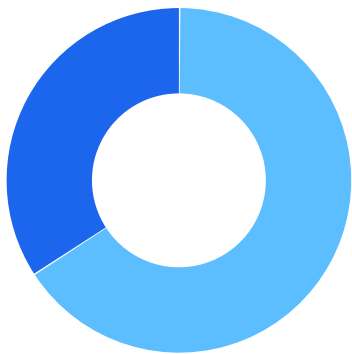


## Occupation Race/Ethnicity Breakdown



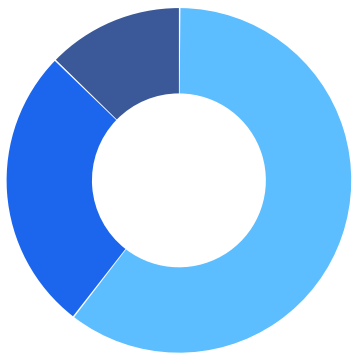
	% of Jobs	Jobs
White	71.2%	81
Asian	16.8%	19
Hispanic or Latino	8.1%	9
Two or More Races	2.0%	2
Black or African American	1.4%	2
American Indian or Alaska Native	0.2%	0
Native Hawaiian or Other Pacific Islander	0.1%	0

## Occupation Gender Breakdown



	% of Jobs	Jobs
Males	65.8%	75
Females	34.2%	39

## National Educational Attainment



	% of Jobs
<span style="color: #00AEEF;">●</span> Bachelor's degree	60.4%
<span style="color: #0056B3;">●</span> Master's degree	26.8%
<span style="color: #003366;">●</span> Doctoral or professional degree	12.8%

# Occupational Programs



**8 Programs**

Of the programs that can train for this job, 8 have produced completions in the last 5 years.



**1,254 Completions (2021)**

The completions from all regional institutions for all degree types.



**16 Openings (2021)**

The average number of openings for an occupation in the region is 74.

CIP Code	Top Programs	Completions (2021)
26.0101	Biology/Biological Sciences, General	763
40.0501	Chemistry, General	209
01.1004	Viticulture and Enology	80
40.0601	Geology/Earth Science, General	55
01.1102	Agronomy and Crop Science	54
01.0000	Agriculture, General	52
03.0501	Forestry, General	41

Top Schools	Completions (2021)
University of California-Santa Barbara	541
California Polytechnic State University-San Luis Obispo	468
Santa Barbara City College	116
Allan Hancock College	60
Westmont College	38
Cuesta College	31

## Appendix A

### **Soil and Plant Scientists (SOC 19-1013):**

Conduct research in breeding, physiology, production, yield, and management of crops and agricultural plants or trees, shrubs, and nursery stock, their growth in soils, and control of pests; or study the chemical, physical, biological, and mineralogical composition of soils as they relate to plant or crop growth. May classify and map soils and investigate effects of alternative practices on soil and crop productivity.

### **Sample of Reported Job Titles:**

Agronomist  
Soil Fertility Extension Specialist  
Plant Physiologist  
Crop Nutrition Scientist  
Research Soil Scientist  
Microbiology Soil Scientist  
Horticulture Specialist  
Scientist  
Research Scientist  
Plant Research Geneticist

### **Related O\*NET Occupation:**

Soil and Plant Scientists (19-1013.00)

A man with dark hair, wearing a blue long-sleeved shirt and a grey apron, is walking away from the camera down a path in a greenhouse. The greenhouse has a curved metal frame and translucent panels. The plants are in rows, and there are yellow stakes with white labels in the foreground.

# Farmers, Ranchers, and Other Agricultural Managers in 2 California Counties

# Contents

What is Lightcast Data? .....	1
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Job Posting Activity .....	7
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## What is Lightcast Data?

Lightcast data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumé, and job postings to give you a complete view of the workforce.

Lightcast data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.



## Report Parameters

### 1 Occupation

11-9013 Farmers, Ranchers, and Other Agricultural Managers

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### 2 Counties

6079 San Luis Obispo County, CA

6083 Santa Barbara County, CA

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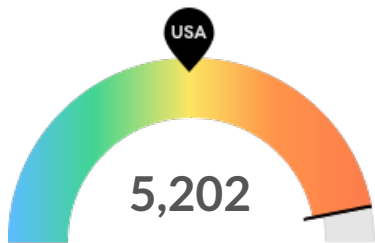
### Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

The information in this report pertains to the chosen occupation and geographical areas.

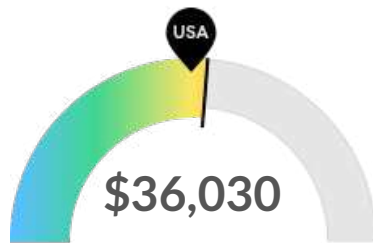
## Executive Summary

### Aggressive Job Posting Demand Over a Deep Supply of Regional Jobs



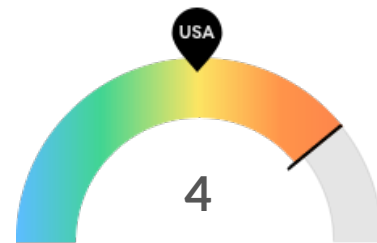
**Jobs (2023)**

Your area is a hotspot for this kind of job. The national average for an area this size is 1,289\* employees, while there are 5,202 here.



**Compensation**

Earnings are about average in your area. The national median salary for Farmers, Ranchers, and Other Agricultural Managers is \$33,491, compared to \$36,030 here.



**Job Posting Demand**

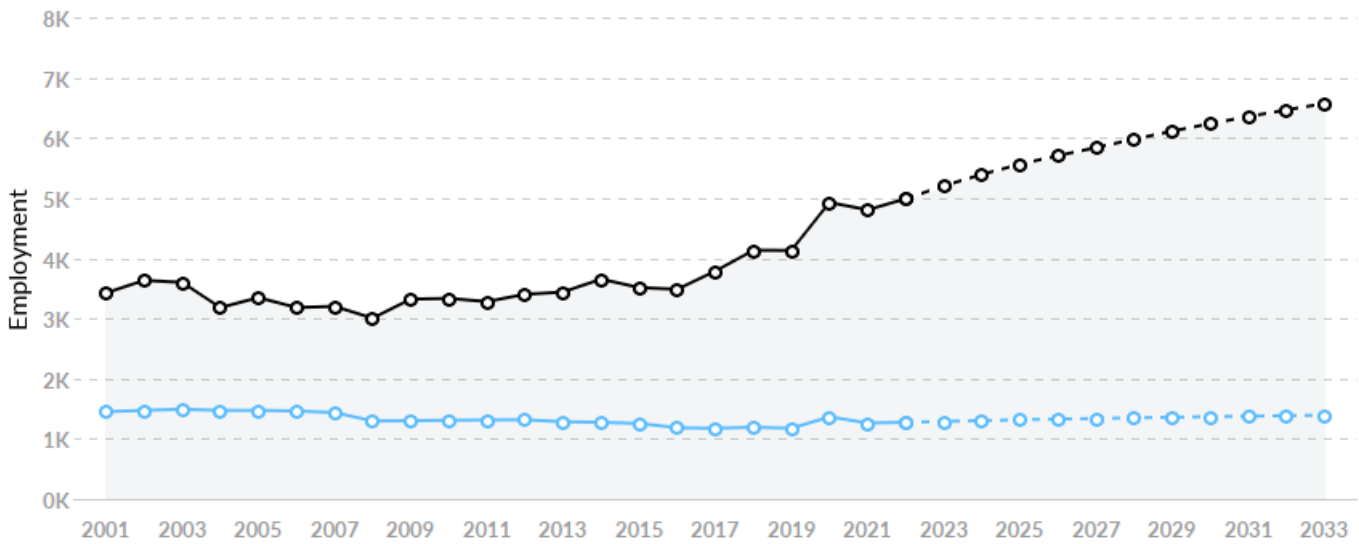
Job posting activity is high in your area. The national average for an area this size is 2\* job postings/mo, while there are 4 here.

\*National average values are derived by taking the national value for Farmers, Ranchers, and Other Agricultural Managers and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

# Jobs

## Regional Employment Is Higher Than the National Average

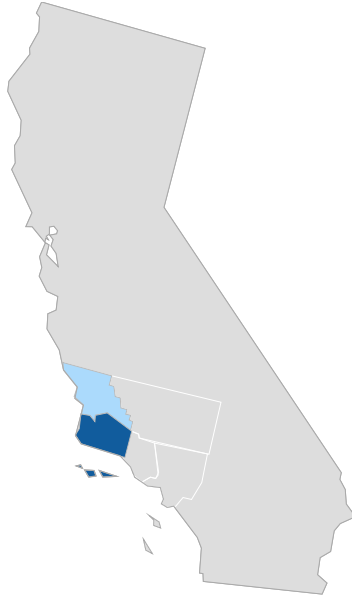
An average area of this size typically has 1,289\* jobs, while there are 5,202 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.



Region	2023 Jobs	2033 Jobs	Change	% Change
● 2 California Counties	5,202	6,570	1,368	26.3%
● National Average	1,289	1,393	103	8.0%

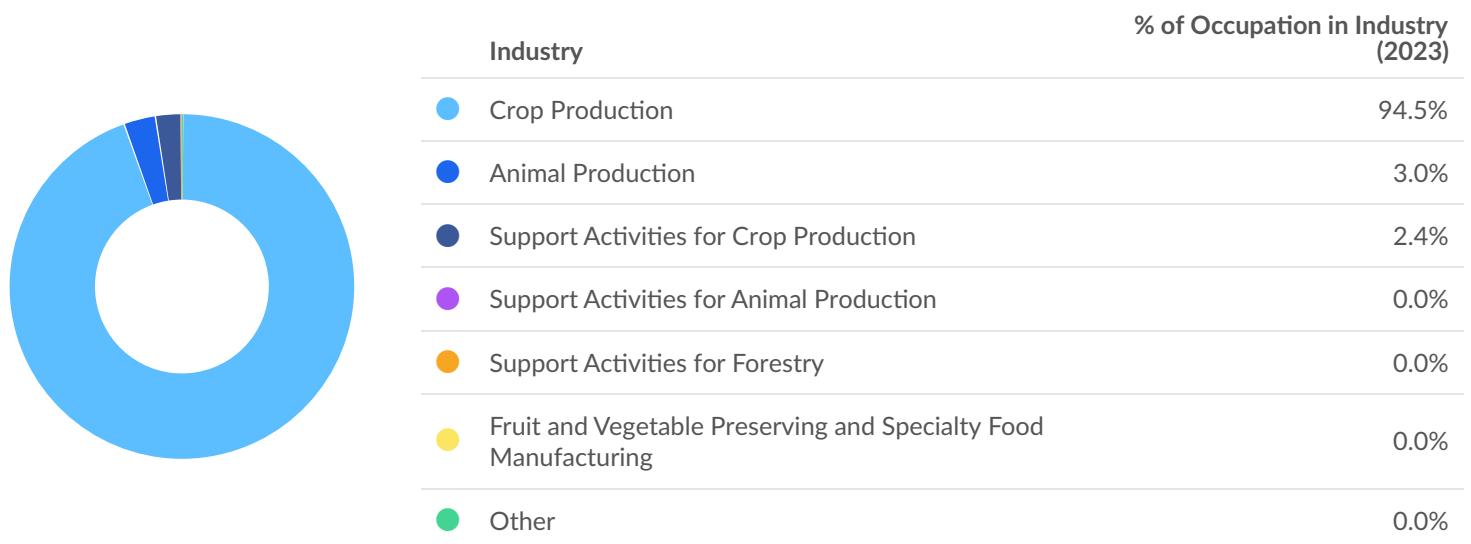
\*National average values are derived by taking the national value for Farmers, Ranchers, and Other Agricultural Managers and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

## Regional Breakdown



County	2023 Jobs
Santa Barbara County, CA	4,560
San Luis Obispo County, CA	641

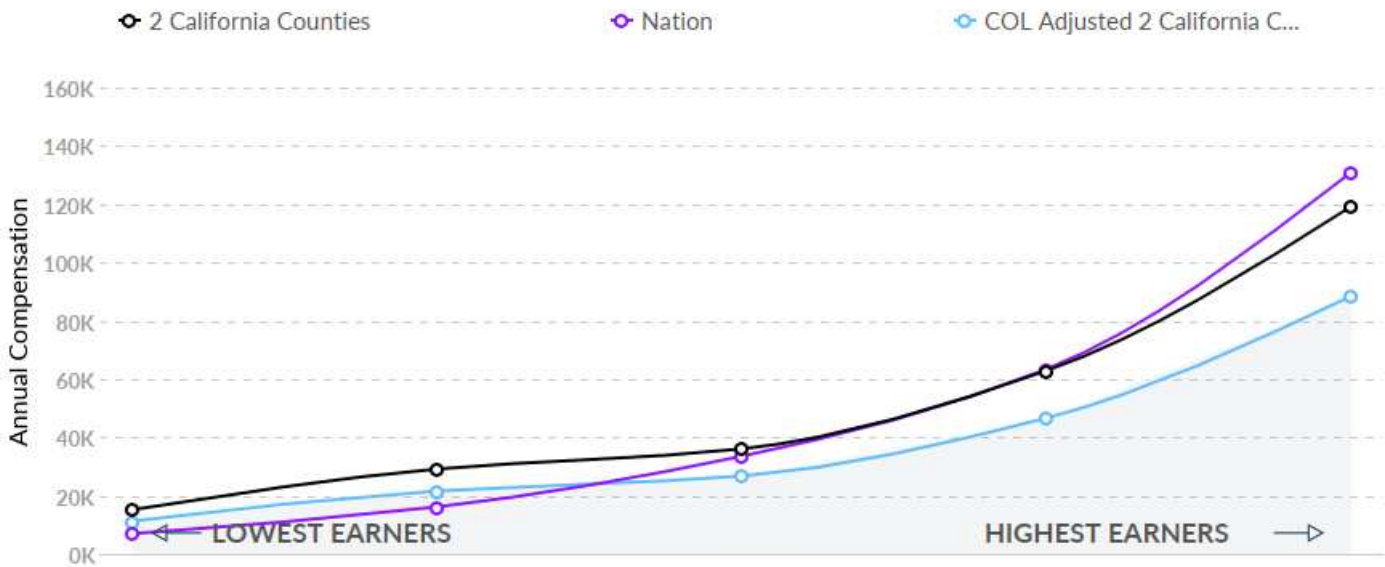
## Most Jobs are Found in the Crop Production Industry Sector



# Compensation

## Regional Compensation Is 8% Higher Than National Compensation

For Farmers, Ranchers, and Other Agricultural Managers, the 2021 median wage in your area is \$36,030, while the national median wage is \$33,491.



# Job Posting Activity



## 24 Unique Job Postings

The number of unique postings for this job from Jan 2023 to Jun 2023.



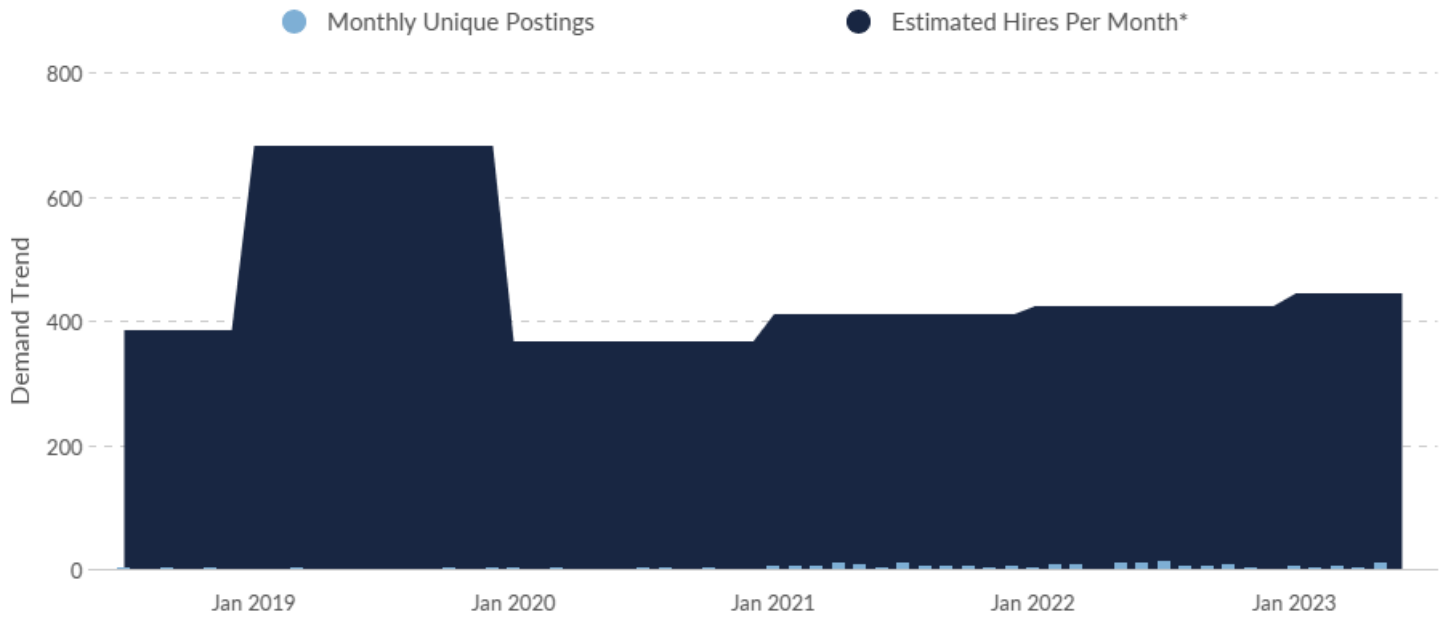
## 15 Employers Competing

All employers in the region who posted for this job from Jan 2023 to Jun 2023.



## 29 Day Median Duration

Posting duration is 4 days shorter than what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2023 - Jun 2023)	Avg Monthly Hires (Jan 2023 - Jun 2023)
Farmers, Ranchers, and Other Agricultural Managers	4	443

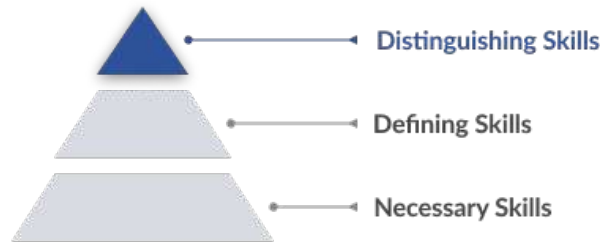
\*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Lightcast hires are calculated using a combination of Lightcast jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
Good Samaritan Shelter	3
Speedling Incorporated	3
Cal Poly Corporation	2
City Of San Luis Obispo	2
Ecological Farming Association	2
Alisal Guest Ranch And Resort	1
Ambyth Estate	1
Bee Sweet Citrus	1
Calpoly Investments LLC.	1
Central Coast Aquarium	1

Top Job Titles	Unique Postings
Farm Managers	6
Farm Assistants	3
Fisheries Technicians	3
Greenhouse Managers	3
Farmers Market Managers	2
Activity Leaders	1
Animal Husbandry Interns	1
Horticulture Managers	1
Scan Technicians	1
Sustainable Agriculture Interns	1

## Top Distinguishing Skills by Demand

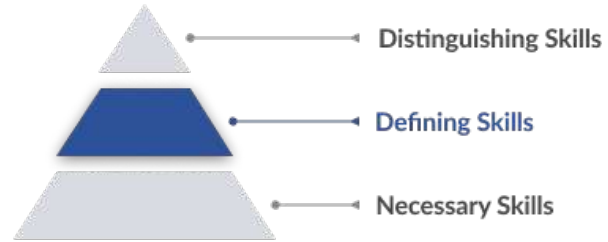
An occupation's Distinguishing Skills are the advanced skills that are called for occasionally. An employee with these skills is likely more specialized and able to differentiate themselves from others in the same role.



Skill	Salary Boosting	Job Postings Requesting
Cannabis Cultivation		1
Fish Culture		0
Aquaculture		0
Spawning		0

## Top Defining Skills by Demand

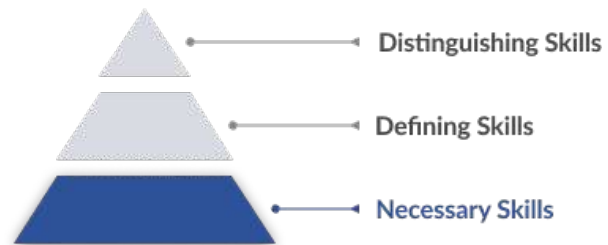
An occupation's Defining Skills represent the day-to-day tasks and responsibilities of the job. An employee needs these skills to qualify for and perform successfully in this occupation.



Skill	Salary Boosting	Job Postings Requesting
Valid Driver's License	✘	9
Transplanting	✘	1

## Top Necessary Skills by Demand

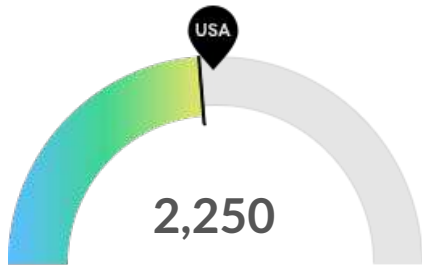
An occupation's Necessary Skills are the specialized skills required for that job and relevant across other similar jobs. An employee needs these skills as building blocks to perform the more complex Defining Skills.



Skill	Salary Boosting	Job Postings Requesting
Irrigation (Landscaping And Agriculture)	✘	7
Biology	✘	5
Agriculture	✘	4
Pruning	✘	1
Cannabis	✘	0
Food Safety And Sanitation	✘	0

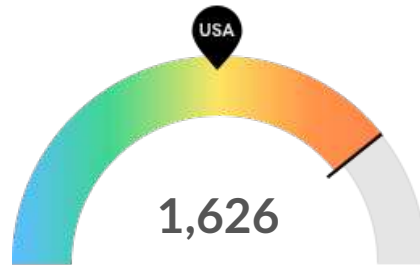
## Demographics

### Retirement Risk Is About Average, While Overall Diversity Is High



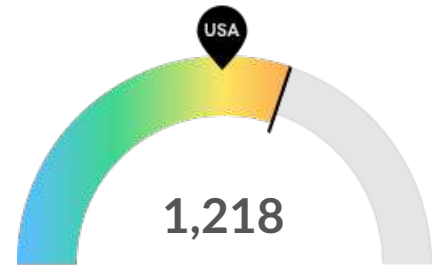
**Retiring Soon**

Retirement risk is about average in your area. The national average for an area this size is 2,422\* employees 55 or older, while there are 2,250 here.



**Racial Diversity**

Racial diversity is high in your area. The national average for an area this size is 730\* racially diverse employees, while there are 1,626 here.

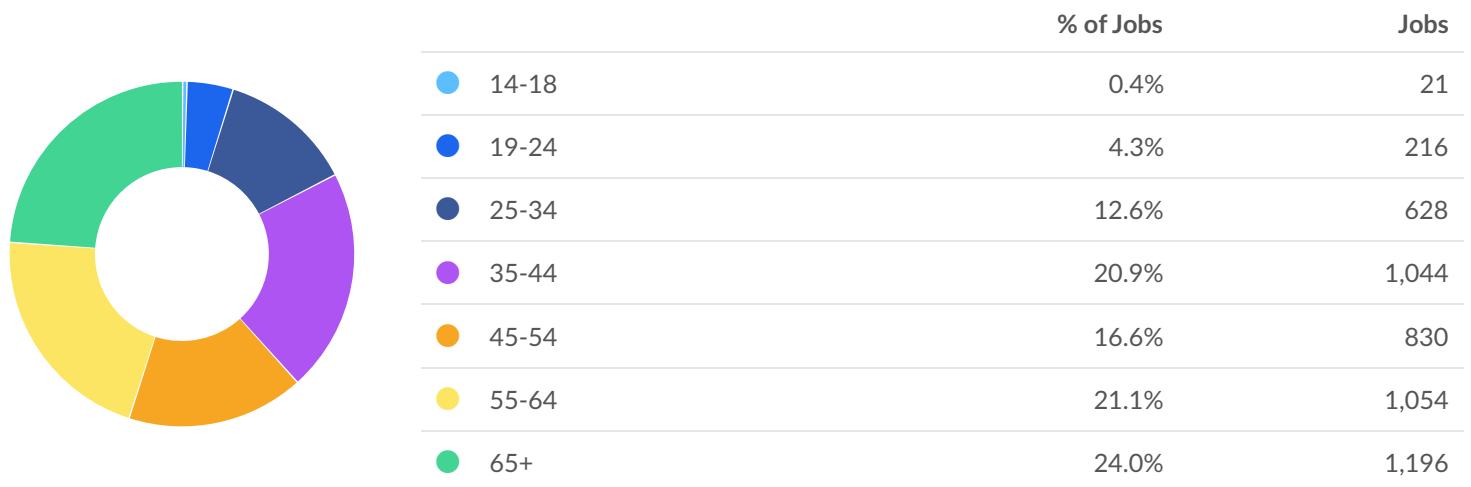


**Gender Diversity**

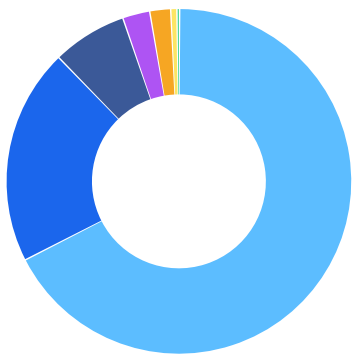
Gender diversity is high in your area. The national average for an area this size is 911\* female employees, while there are 1,218 here.

\*National average values are derived by taking the national value for Farmers, Ranchers, and Other Agricultural Managers and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

## Occupation Age Breakdown

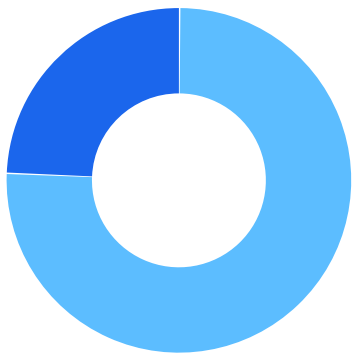


## Occupation Race/Ethnicity Breakdown



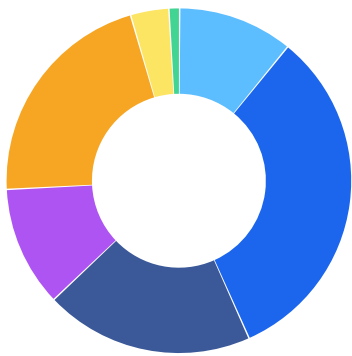
	% of Jobs	Jobs
White	67.4%	3,362
Hispanic or Latino	20.3%	1,011
Asian	7.0%	349
Two or More Races	2.6%	127
Black or African American	2.0%	97
American Indian or Alaska Native	0.6%	29
Native Hawaiian or Other Pacific Islander	0.3%	13

## Occupation Gender Breakdown



	% of Jobs	Jobs
Males	75.6%	3,770
Females	24.4%	1,218

## National Educational Attainment



	% of Jobs
● Less than high school diploma	10.8%
● High school diploma or equivalent	32.5%
● Some college, no degree	19.6%
● Associate's degree	11.3%
● Bachelor's degree	21.3%
● Master's degree	3.6%
● Doctoral or professional degree	1.0%

# Occupational Programs



## 11 Programs

Of the programs that can train for this job, 11 have produced completions in the last 5 years.



## 604 Completions (2021)

The completions from all regional institutions for all degree types.



## 703 Openings (2021)

The average number of openings for an occupation in the region is 74.

CIP Code	Top Programs	Completions (2021)
01.0901	Animal Sciences, General	169
01.0102	Agribusiness/Agricultural Business Operations	161
01.1004	Viticulture and Enology	80
01.1102	Agronomy and Crop Science	54
01.0000	Agriculture, General	52
04.0601	Landscape Architecture	50
01.0905	Dairy Science	18
01.0304	Crop Production	14
01.0601	Applied Horticulture/Horticulture Operations, General	4
01.0603	Ornamental Horticulture	1

Top Schools	Completions (2021)
California Polytechnic State University-San Luis Obispo	540
Allan Hancock College	33
Cuesta College	26
Santa Barbara City College	5

## Appendix A

**Farmers, Ranchers, and Other Agricultural Managers (SOC 11-9013):**

Plan, direct, or coordinate the management or operation of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, and supervise farm workers or contract for services to carry out the day-to-day activities of the managed operation. May engage in or supervise planting, cultivating, harvesting, and financial and marketing activities. Excludes First-Line Supervisors of Farming, Fishing, and Forestry Workers (45-1011).

**Sample of Reported Job Titles:**

- Hatchery Manager
- Greenhouse Manager
- Fish Hatchery Manager
- Farm Manager
- Ranch Manager
- Nursery Manager
- Hatchery Supervisor
- Harvesting Manager
- Farm Operations Technical Director
- Aquaculture Director

**Related O\*NET Occupation:**

Farmers, Ranchers, and Other Agricultural Managers (11-9013.00)

# Agricultural Technicians in 2 California Counties

# Contents

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## What is Lightcast Data?

Lightcast data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumé, and job postings to give you a complete view of the workforce.

Lightcast data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.



## Report Parameters

### 1 Occupation

19-4012 Agricultural Technicians

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### 2 Counties

6079 San Luis Obispo County, CA

6083 Santa Barbara County, CA

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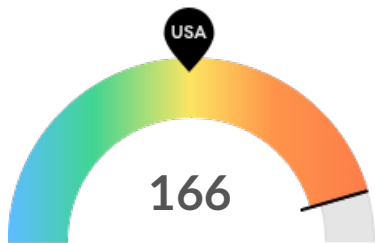
### Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

The information in this report pertains to the chosen occupation and geographical areas.

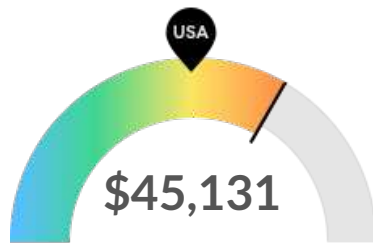
## Executive Summary

### Average Job Posting Demand Over a Deep Supply of Regional Jobs



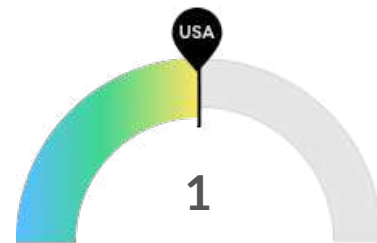
**Jobs (2023)**

Your area is a hotspot for this kind of job. The national average for an area this size is 47\* employees, while there are 166 here.



**Compensation**

Earnings are high in your area. The national median salary for Agricultural Technicians is \$40,429, compared to \$45,131 here.



**Job Posting Demand**

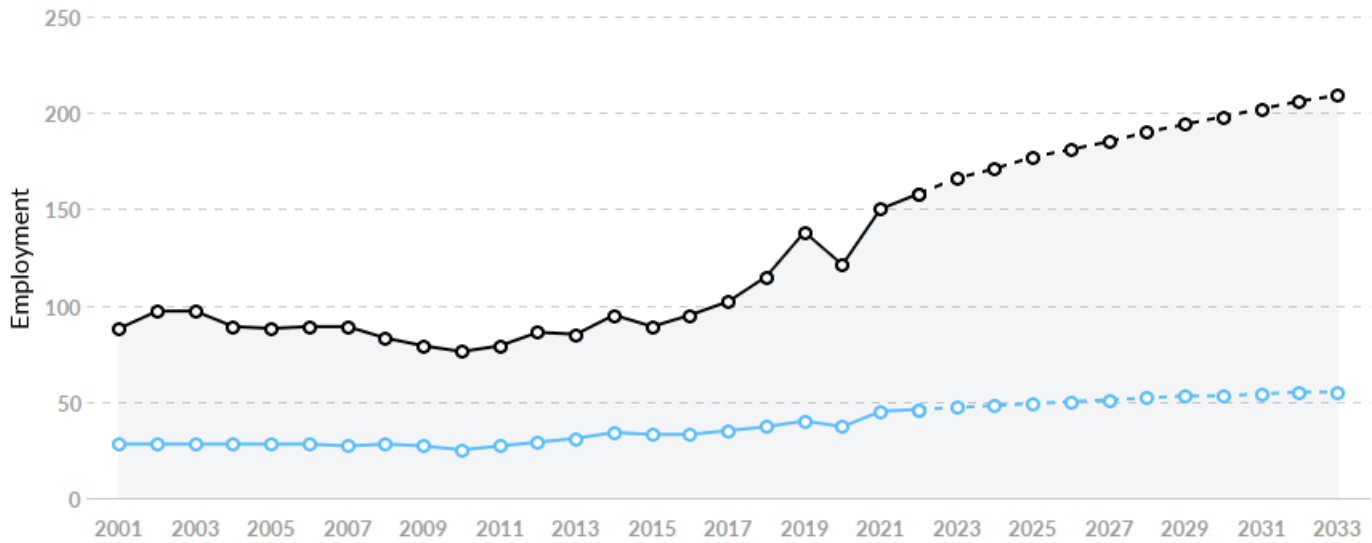
Job posting activity is about average in your area. The national average for an area this size is 1\* job posting/mo, while there is 1 here.

\*National average values are derived by taking the national value for Agricultural Technicians and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

# Jobs

## Regional Employment Is Higher Than the National Average

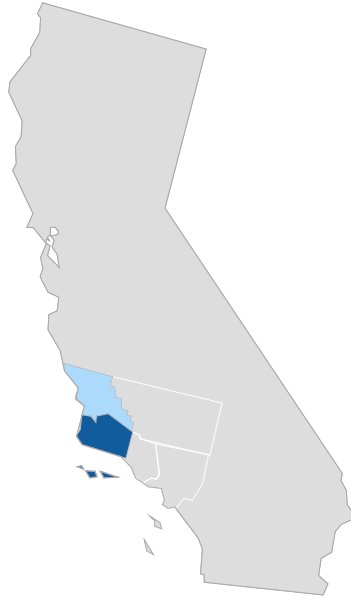
An average area of this size typically has 47\* jobs, while there are 166 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.



Region	2023 Jobs	2033 Jobs	Change	% Change
● 2 California Counties	166	209	43	26.1%
● National Average	47	55	8	17.1%

\*National average values are derived by taking the national value for Agricultural Technicians and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

## Regional Breakdown



County	2023 Jobs
Santa Barbara County, CA	141
San Luis Obispo County, CA	25

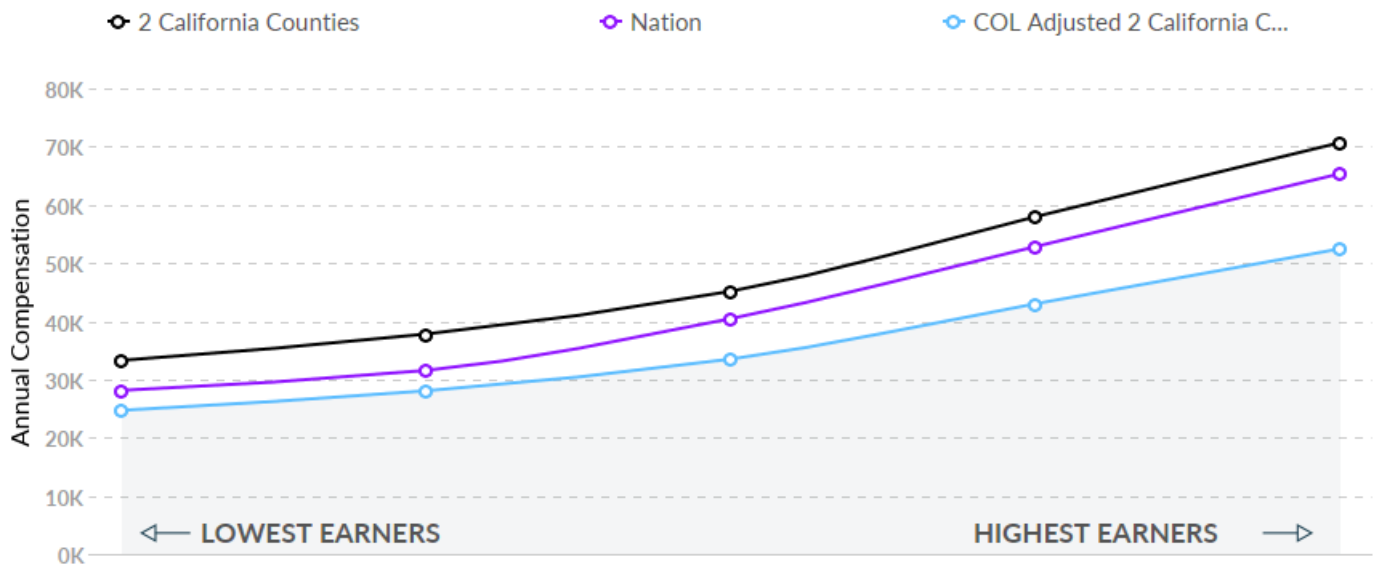
## Most Jobs are Found in the Crop Production Industry Sector



# Compensation

## Regional Compensation Is 12% Higher Than National Compensation

For Agricultural Technicians, the 2021 median wage in your area is \$45,131, while the national median wage is \$40,429.



# Job Posting Activity



**7 Unique Job Postings**

The number of unique postings for this job from Jan 2023 to Jun 2023.



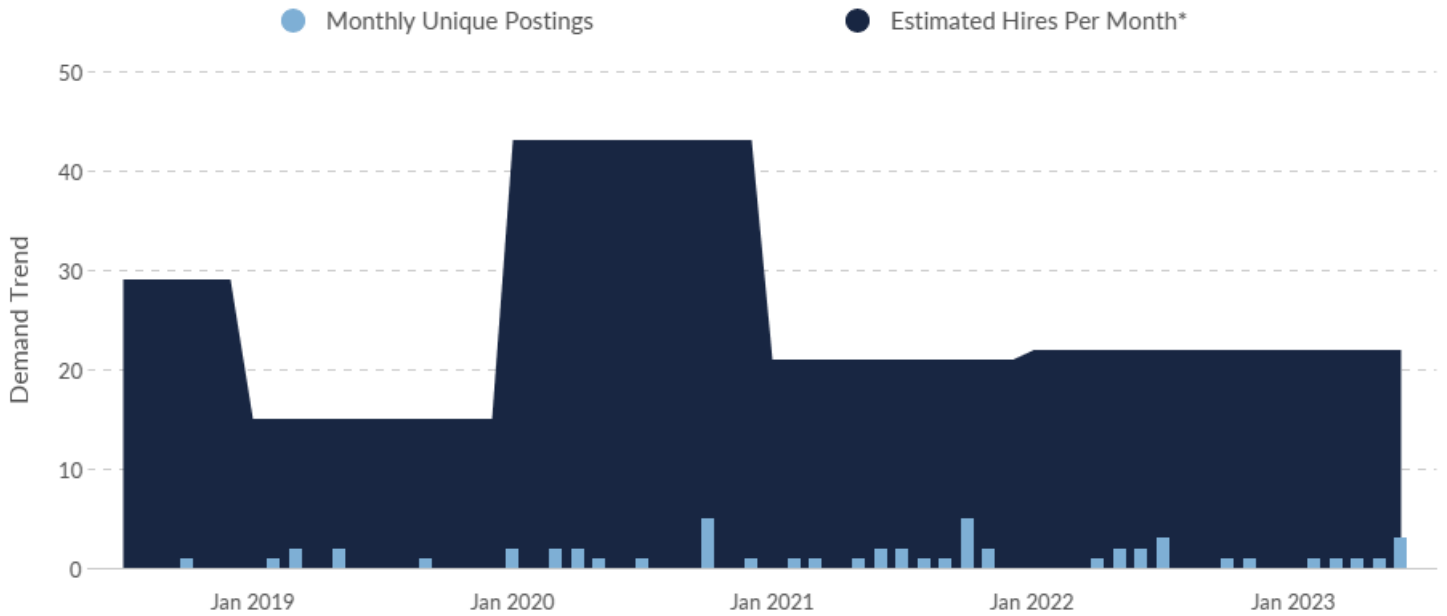
**6 Employers Competing**

All employers in the region who posted for this job from Jan 2023 to Jun 2023.



**0 Day Median Duration**

Posting duration is 33 days longer than what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2023 - Jun 2023)	Avg Monthly Hires (Jan 2023 - Jun 2023)
Agricultural Technicians	1	22

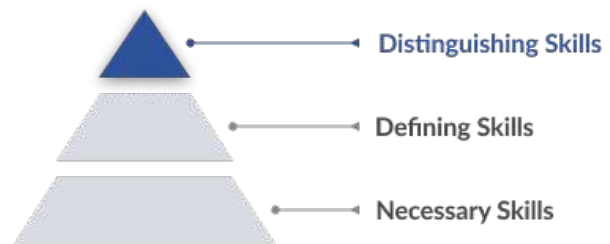
\*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Lightcast hires are calculated using a combination of Lightcast jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
Pacific Ag Research	2
California Public Utilities Comm...	1
County Of San Luis Obispo	1
Le Vigne Winery	1
Viridian Staffing	1

Top Job Titles	Unique Postings
Agricultural Technicians	5
Harvest Cellar Interns	1
Harvest Managers	1

## Top Distinguishing Skills by Demand

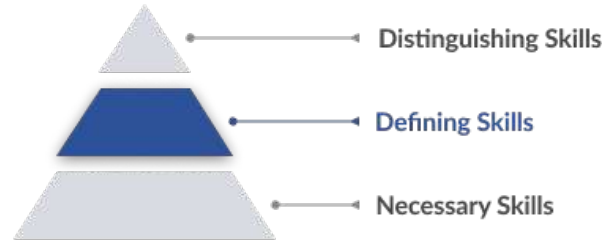
An occupation's Distinguishing Skills are the advanced skills that are called for occasionally. An employee with these skills is likely more specialized and able to differentiate themselves from others in the same role.



Skill	Salary Boosting	Job Postings Requesting
Crop Scouting		0
Commercial Applicator License		0

## Top Defining Skills by Demand

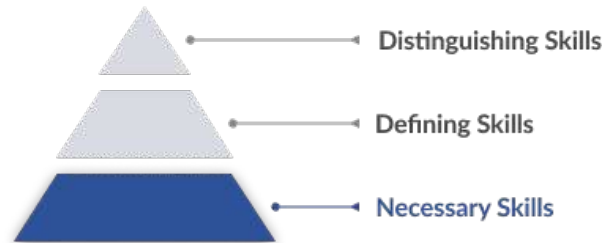
An occupation's Defining Skills represent the day-to-day tasks and responsibilities of the job. An employee needs these skills to qualify for and perform successfully in this occupation.



Skill	Salary Boosting	Job Postings Requesting
Agriculture	✘	4
Valid Driver's License	✘	1

## Top Necessary Skills by Demand

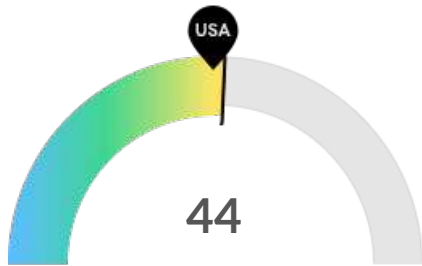
An occupation's Necessary Skills are the specialized skills required for that job and relevant across other similar jobs. An employee needs these skills as building blocks to perform the more complex Defining Skills.



Skill	Salary Boosting	Job Postings Requesting
Fertilizers	✘	2
Irrigation (Landscaping And Agriculture)	✘	1
Agronomy	✘	0
Marketing	✘	0
Precision Agriculture	✔	0

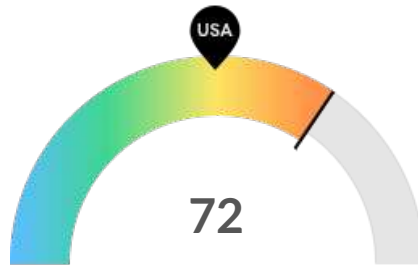
## Demographics

### Retirement Risk Is About Average, While Overall Diversity Is High



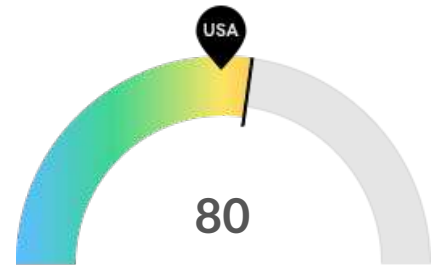
**Retiring Soon**

Retirement risk is about average in your area. The national average for an area this size is 42\* employees 55 or older, while there are 44 here.



**Racial Diversity**

Racial diversity is high in your area. The national average for an area this size is 43\* racially diverse employees, while there are 72 here.

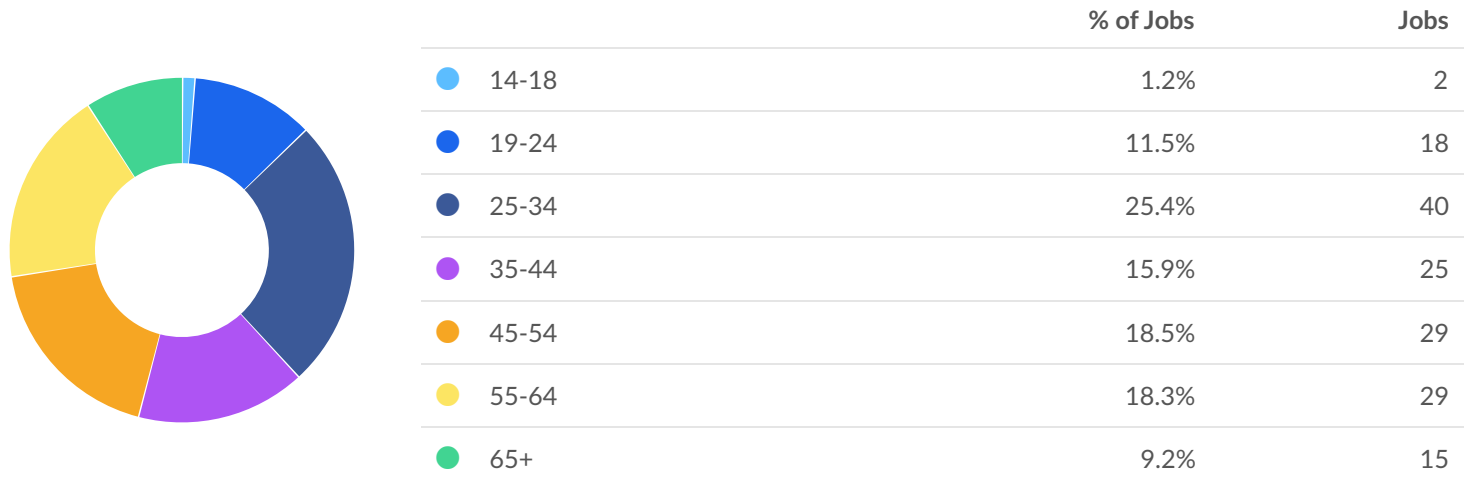


**Gender Diversity**

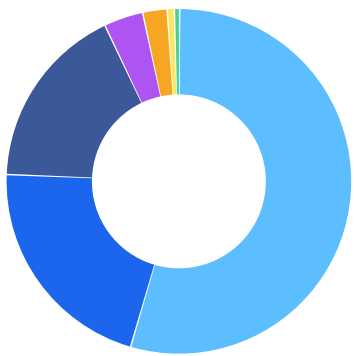
Gender diversity is high in your area. The national average for an area this size is 70\* female employees, while there are 80 here.

\*National average values are derived by taking the national value for Agricultural Technicians and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

## Occupation Age Breakdown

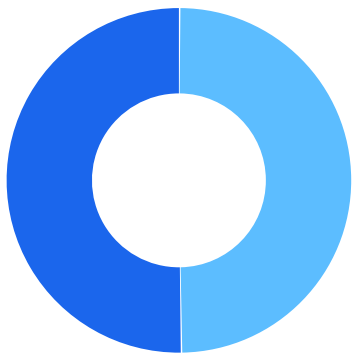


## Occupation Race/Ethnicity Breakdown



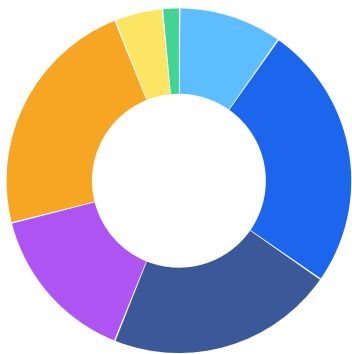
	% of Jobs	Jobs
White	54.5%	86
Hispanic or Latino	21.1%	33
Asian	17.3%	27
Black or African American	3.7%	6
Two or More Races	2.3%	4
Native Hawaiian or Other Pacific Islander	0.7%	1
American Indian or Alaska Native	0.5%	1

## Occupation Gender Breakdown



	% of Jobs	Jobs
Males	49.7%	79
Females	50.3%	80

## National Educational Attainment



	% of Jobs
<span style="color: #00AEEF;">●</span> Less than high school diploma	9.7%
<span style="color: #0070C0;">●</span> High school diploma or equivalent	24.9%
<span style="color: #1A3A5A;">●</span> Some college, no degree	21.4%
<span style="color: #800080;">●</span> Associate's degree	15.0%
<span style="color: #FFA500;">●</span> Bachelor's degree	22.9%
<span style="color: #FFD700;">●</span> Master's degree	4.5%
<span style="color: #008000;">●</span> Doctoral or professional degree	1.6%

## Occupational Programs



### 2 Programs

Of the programs that can train for this job, 2 have produced completions in the last 5 years.





### 132 Completions (2021)



The completions from all regional institutions for all degree types.



### 29 Openings (2021)

The average number of openings for an occupation in the region is 74.

CIP Code	Top Programs	Completions (2021)
01.1004	Viticulture and Enology	80 
01.0000	Agriculture, General	52 

Top Schools	Completions (2021)
California Polytechnic State University-San Luis Obispo	114 
Allan Hancock College	18 

## Appendix A

### **Agricultural Technicians (SOC 19-4012):**

Work with agricultural scientists in plant, fiber, and animal research, or assist with animal breeding and nutrition. Set up or maintain laboratory equipment and collect samples from crops or animals. Prepare specimens or record data to assist scientists in biology or related life science experiments. Conduct tests and experiments to improve yield and quality of crops or to increase the resistance of plants and animals to disease or insects.

### **Sample of Reported Job Titles:**

- Seed Analyst
- Research Technician
- Research Specialist
- Research Associate
- Research Assistant
- Precision Agriculture Specialist (Precision Ag Specialist)
- Precision Farming Coordinator
- Crop Specialist
- Soil Fertility Specialist
- Nutrient Management Specialist

### **Related O\*NET Occupations:**

- Agricultural Technicians (19-4012.00)
- Precision Agriculture Technicians (19-4012.01)

Program Review Signature Page:




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Program Review Lead

05/24/2026

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Date

  
Sean Abel (May 28, 2026 14:31:23 PDT)

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Program Dean

May 28, 2026

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Date



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Vice President, Academic Affairs

Jun 15, 2026

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Date










# AG Education and Industry Partnerships 2025-26

Final Audit Report

2026-06-16

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