



Farm Management Agriculture Technology and Sciences, General TOP: 0101.00

February 2020

Prepared by the South Central Coast Center of Excellence for
Labor Market Research

Program Recommendation

This report was compiled by the South Central Coast¹ Center of Excellence to provide regional labor market data for the program recommendation – Agriculture Technology and Sciences, General. This report can help determine whether there is demand in the local labor market that is not being met by the supply from programs of study (CCC and non-CCC) that align with this occupation group.

Key Findings

- In the South Central Coast region, **the number of jobs related to Agriculture Technology and Sciences, General are expected to remain steady**, over the next five years.
- Farmers, Ranchers, and Other Agricultural Managers are expected to anticipate **a low risk of automation**.
- In 2017 there were 601 regional completions in programs related to the occupations identified as related to Agriculture Technology and Sciences, General and 948 openings, indicating an **undersupply**.
- Typical entry-level education is a **high school diploma or equivalent**.
- Completers of Agriculture Technology and Sciences, General programs from the 2015-2016 academic year had a **median annual wage** upon completion of \$22,128.
- 59% of students are **employed within a year** after completing a program.
- 46% of students are **earning a living wage**.

¹ The South Central Coast Region consists of San Luis Obispo County, Santa Barbara County, Ventura County, and the following cities from North Los Angeles County: Canyon Country, Castaic, Lake Hughes, Lancaster, Littlerock, Llano, Newhall, Palmdale, Pearblossom, Santa Clarita, Stevenson Ranch, and Valencia.

Occupation Codes and Descriptions

Currently, there is one occupation in the standard occupational classification (SOC) system that was identified as related to Agriculture Technology and Sciences, General for this analysis. The occupation title and descriptions, as well as reported job titles are included in Exhibit 1.

Exhibit 1 – Occupation, description, and sample job titles

SOC Code	Title	Description	Sample of Reported Job Titles
11-9013	Farmers, Ranchers, and Other Agricultural Managers	Plan, direct, or coordinate the management or operation of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, or 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, financial, or marketing activities.	Accredited Farm Manager, Cash Crop Farmer, Dairy Farmer, Farm Manager, Farm Operator, Farmer, Grain Farmer, Ranch Manager, Rancher, Sow Farm Manager

Source: O*NET Online

Current and Future Employment

In the South Central Coast region, the number of jobs related to Agriculture Technology and Sciences, General are expected to remain steady, over the next five years. Exhibit 2 contains detailed employment projections data for these occupations.

Exhibit 2 – Five-year projections for Agriculture Technology and Sciences, General in the South Central Coast region

SOC	Occupation	2018 Jobs	2023 Jobs	2018-2023 Change	2018-2023 % Change
11-9013	Farmers, Ranchers, and Other Agricultural Managers	8,575	9,207	633	7.4%

Source: Economic Modeling Specialists International (EMSI)

Earnings

In the South Central Coast region, the average wage for the listed occupations is \$29.14 per hour.

Exhibit 3 contains hourly wages and annual average earnings for these occupations. Entry-level hourly earnings are represented by the 25th percentile of wages, median hourly earnings are represented by the 50th percentile of wages, and experienced hourly earnings are represented by the 75th percentile of wages, demonstrating various levels of employment.

Exhibit 3 – Earnings for Agriculture Technology and Sciences, General in the South Central Coast region

SOC	Occupation	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
11-9013	Farmers, Ranchers, and Other Agricultural Managers	\$16.07	\$29.14	\$43.36

Source: Economic Modeling Specialists International (EMSI)

Employer Job Postings

In this research brief, real-time labor market information is used to provide a more nuanced view of the current job market, as it captures job advertisements for occupations relevant to the field of study. Employer job postings are consulted to understand who is employing farmers, and what they are looking for in potential candidates. To identify job postings related to Agriculture Technology and Sciences, General, the following standard occupational classifications were used:

11-9013 Farmers, Ranchers, and Other Agricultural Managers

Top Occupations

In 2018, there were 21 employer postings for occupations related to Agriculture Technology and Sciences, General.

Exhibit 4 – Top occupations in job postings and risk of automation tables

SOC Code	Occupation	Job Postings, Full Year 2018
11-9013	Farmers, Ranchers, and Other Agricultural Managers	21

Source: Labor Insight/Jobs (Burning Glass)

SOC Code	Occupation	Risk of Automation
11-9013	Farmers, Ranchers, and Other Agricultural Managers	Low

Source: Labor Insight/Jobs (Burning Glass)

Top Titles

The top job titles for employers posting ads for jobs related to Agriculture Technology and Sciences, General are listed in Exhibit 5. Grower/Manager is mentioned as the job title in 14% of all relevant job postings (3 postings).

Exhibit 5 –Job titles

Title	Job Postings, Full Year 2018
Grower/Manager	3
Manager, Agriculture Industry	3
Harvesting	2
Technician	2
Technician/Sampler	2

Source: Labor Insight/Jobs (Burning Glass)

Top Employers

Exhibit 6 lists the major employers hiring professionals in the Agriculture Technology and Sciences, General field. The top employer posting job ads was Pacific States Marine Fisheries Commission. The top worksite cities in the region for these occupations were San Luis Obispo, Nipomo, Santa Clarita, Santa Maria, and Santa Barbara.

Exhibit 6 – Top employers (n=21)

Employer	Job Postings, Full Year 2018
Pacific States Marine Fisheries Commission	4
Cal Poly Corporation	3
Speedling Incorporated	3
Brady Corporation	1
Chili's	1

Source: Labor Insight/Jobs (Burning Glass)

Skills

Spreadsheets is the most sought after skill for employers hiring for jobs related to Agriculture Technology and Sciences, General.

Exhibit 7 –Job skills (n=14)

Skills	Job Postings, Full Year 2018
Spreadsheets	6
Repair	5
Water Quality	5
Agronomy	4
Data Collection	4
Data Management	4
Fishery Biology	4

Source: Labor Insight/Jobs (Burning Glass)

Industry Concentration

Exhibit 8 shows the industries with most Agriculture Technology and Sciences, General postings in the South Central Coast. Note: 19% of records have been excluded because they do not include an industry. As a result, the chart below may not be representative of the full sample.

Exhibit 8 – Industries employing the most in the Agriculture Technology and Sciences, General field, 2018

Industry	Occupation Group Jobs in Industry	% of Occupation Group in Industry
Agriculture, Forestry, Fishing, and Hunting	9	53%
Accommodation and Food Services	3	18%
Manufacturing	3	18%
Administration and Support and Waste Management and Remediation Services	1	6%
Finance and Insurance	1	6%

Source: Labor Insight/Jobs (Burning Glass)

Education and Training

Exhibit 9 shows the typical entry-level education requirement for the occupations of interest, along with the typical on-the-job training needed to attain competency in the occupation.

Exhibit 9 – Education and training requirements

SOC	Occupation	Typical entry-level education	Typical on-the-job training
11-9013	Farmers, Ranchers, and Other Agricultural Managers	High school diploma or equivalent	none

Source: Bureau of Labor Statistics Employment Projections (Educational Attainment)

Regional Completions and Openings

There were 601 regional completions (2018) and 948 regional openings (2018) in the South Central Coast region in programs related to the occupations identified as related to Agriculture Technology and Sciences, General.

Exhibit 10 – Completions and Openings

11 Regional Institutions had Related Programs (2018)	601 Regional Completions (2018)	948 Annual Openings (2018)
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Source: Economic Modeling Specialists International (EMSI)

Related Programs

CIP Code	Program	Completions (2018)
01.0102	Agribusiness/Agricultural Business Occupations	173
01.0901	Animal Sciences, General	149
01.0309	Viticulture and Enology	96
01.0302	Animal/Livestock Husbandry and Production	74
01.1102	Agronomy and Crop Science	55
01.0905	Dairy Science	46
01.0601	Applied Horticulture/Horticulture Operations, General	5
01.0606	Plant Nursery Operations and Management	2
01.0603	Ornamental Horticulture	1
01.0101	Agricultural Business and Management, General	0
01.1103	Horticultural Science	0

Source: Economic Modeling Specialists International (EMSI)

Student Outcomes

The CTE LaunchBoard provides student outcome data on the effectiveness of CTE programs. The following student outcome information was collected from exiters of the Agriculture Technology and Sciences, General Program (TOP: 0101.00), statewide, for the 2015-16 academic year.

- The median annual wage for students after exiting is \$22,128.
- 59% of students are employed within a year after completing a program.
- 46% of students are earning a living wage.
- Most Common middle-skills jobs for this program are:
 - Agricultural and Food Science Technicians

Source: CTE LaunchBoard

Sources

O*Net Online, Labor Insight/Jobs (Burning Glass), Economic Modeling Specialists International (EMSI), MIT Living Wage Calculator, Bureau of Labor Statistics (BLS) Education Attainment, California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart, CTE LaunchBoard, Statewide CTE Outcomes Survey, Employment Development Department Unemployment Insurance Dataset

Notes

Data included in this analysis represent the labor market demand for relevant positions most closely related to Agriculture Technology and Sciences, General. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study and can signal demand and show what employers are looking for in potential employees, but is not a perfect measure of the quantity of open positions. All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.