



Agriculture Plant Science (TOP 0103.00)

November 2024

**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 Plant Science. 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 that align with the following occupations:

- Farmworkers and Laborers, Crop, Nursery, and Greenhouse (SOC 45-2092)
- Farmworkers, Farm, Ranch, and Aquacultural Animals (SOC 45-2093)

Key Findings

- In 2023, there were 34,026 jobs for the two occupations of interest in the South Central Coast Region.
- The number of new jobs is expected to increase by 9% through 2028.
- Projections show approximately 5,806 annual openings in the region. There were 101 awards conferred in relevant programs, indicating an undersupply.
- According to the Bureau of Labor Statistics, there are no formal educational credentials typically required for 1) Farmworkers and Laborers, Crop, Nursery, and Greenhouse and 2) Farmworkers, Farm, Ranch, and Aquacultural Animals.

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

There are two occupations in the standard occupational classification (SOC) system that were identified for this analysis. The occupation titles and descriptions, as well as reported job titles, are included in Exhibit 1.

Exhibit 1 – Occupations, Descriptions, and Sample Job Titles

SOC Code	Title	Description	Sample of Reported Job Titles
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialties, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides; or cleaning, grading, sorting, packing, and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities.	Farm Laborer, Farmer, Field Irrigation Worker, Gardener, Greenhouse Worker, Grower, Harvester, Nursery Worker, Orchard Worker, Picker
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	Attend to live farm, ranch, open range or aquacultural animals that may include cattle, sheep, swine, goats, horses and other equines, poultry, rabbits, finfish, shellfish, and bees. Attend to animals produced for animal products, such as meat, fur, skins, feathers, eggs, milk, and honey. Duties may include feeding, watering, herding, grazing, milking, castrating, branding, de-beaking, weighing, catching, and loading animals. May maintain records on animals; examine animals to detect diseases and injuries; assist in birth deliveries; and administer medications, vaccinations, or insecticides as appropriate. May clean and maintain animal housing areas. Includes workers who shear wool from sheep and collect eggs in hatcheries.	Cowboy, Farm Hand, Farrowing Worker, Herdsman, Livestock Handler, Milking Worker, Ranch Hand, Rancher, Vaccinator, Wrangler

Source: O*NET Online

Current and Future Employment

In the South Central Coast region, the number of jobs for Agriculture Plant Science-related occupations is expected to increase by 9% through 2028. Approximately 5,806 annual openings are expected through 2028.

Exhibit 2a – Five-Year Projections for Agriculture Plant Science-related workers in the South Central Coast Region

SOC	Occupation	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	30,118	32,755	2,638	9%	5,157
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	3,908	4,177	269	7%	649
		34,026	36,933	2,907	9%	5,806

Source: Lightcast™ Analyst

Exhibit 2b – Five-Year Projections for Agriculture Plant Science-related workers in the San Luis Obispo County

SOC	Occupation	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	3,585	3,957	371	10%	628
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	295	315	19	6%	49
		3,881	4,271	390	10%	677

Source: Lightcast™ Analyst

Earnings

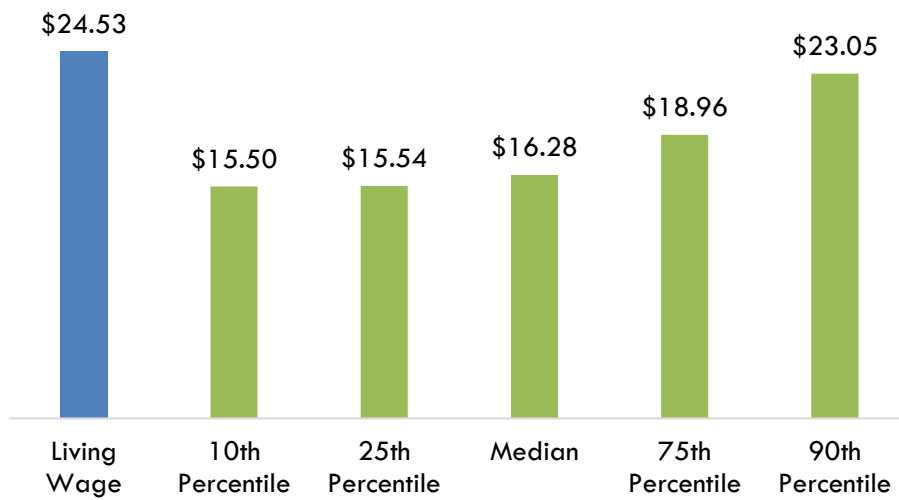
Exhibit 3 contains hourly wages for the occupations of interest. Entry-level hourly earnings are represented by the 25th percentile of wages, median hourly earnings are represented by the 50th percentile of wages, and experienced hourly earnings are represented by the 75th percentile of wages, demonstrating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

Exhibit 3 – Earnings in the South Central Coast Region

SOC	Occupation	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	\$15.54	\$16.04	\$17.74
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	\$15.53	\$16.52	\$20.17

Source: Lightcast™ Analyst

Exhibit 3b – Earnings in the South Central Coast Region



Source: Family Needs Calculator (Living wage is based on Single Adult households with no children); Lightcast™ Analyst

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 the occupations relevant to the field of study. Employer job postings are consulted to understand who is looking for professionals in a given field, and what they are looking for in potential candidates. To identify relevant job postings, the following occupations were used:

45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals

Top Occupations

Over the past 12 months (November 2023 to October 2024), there have been 156 employer job postings for the two occupations of interest.

Exhibit 4 – Job Postings by Occupation

SOC/ONET Code	Occupation	Job Postings, Last 12 months
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	81
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	75
	Total	156

Source: Lightcast™ Analyst

Top Titles

The top job titles for employers posting ads for Agriculture Plant Science-related occupations are listed in Exhibit 5.

Exhibit 5 – Job Titles

Title	Job Postings, Last 12 months
Ranch Hands	39
Irrigation Specialists	16
Irrigation Technicians	15
Growers	8
Farm Hands	7
Farm Laborers	4
Agricultural Assistants	4
Harvest Interns	3
Trappers	3
Garden Assistants	2

Source: Lightcast™ Analyst

Top Employers

Exhibit 6 lists the major employers hiring professionals in the field of interest. The top employers posting job ads were Cal Poly San Luis Obispo and PeopleReady.

Exhibit 6 – Top Employers

Employer	Job Postings, Last 12 months
Cal Poly San Luis Obispo	5
PeopleReady	4
Brightview	4
University of California	4
Flag Ranch	3
Glass House Farms	3

Source: Lightcast™ Analyst

Skills

The tables in Exhibit 7 list employers' most commonly requested skills in job postings related to the two occupations of interest. Irrigation is the most sought-after specialized skill for employers. Communication was the most requested baseline skill. Microsoft Excel was the most requested software skill.

Exhibit 7 – Specialized Skills

Skills	Job Postings, Last 12 months
Irrigation (Landscaping and Agriculture)	59
Agriculture	25
Mowing	19
Weed Control	17
Power Tool Operation	15
Horse Care	15
Landscaping	14
Farming	13
Valves (Piping)	13
Animal Feeding	10

Source: Lightcast™ Analyst

Exhibit 7b – Baseline Skills

Skills	Job Postings, Last 12 months
Communication	39
English Language	35
Lifting Ability	30
Operations	27
Management	23
Multilingualism	17
Strong Work Ethic	16
Research	14
Spanish Language	13
Troubleshooting (Problem Solving)	13

Source: Lightcast™ Analyst

Exhibit 7c – Software and Programming Skills

Skills	Job Postings, Last 12 months
Microsoft Excel	8
Microsoft Outlook	5
Microsoft Word	4
Microsoft PowerPoint	3
Microsoft Office	2

Source: Lightcast™ Analyst

Education and Training

Exhibit 8 shows the typical entry-level education requirement for the two occupations included in this report. Both occupations do not typically require any formal educational credential.

Exhibit 8 – Education and Training Requirements

SOC	Occupation	Typical entry-level education	Typical on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	No formal educational credential	Short-term
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	No formal educational credential	Short-term

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

Regional Completions and Openings

Between 2020 and 2023, there were 101 awards conferred in the South Central Coast region aligned with the programs that have historically trained for the occupations of interest.

Exhibit 9 – Three-Year Average of Awards Conferred in the Region

TOP/CIP Code	Program	3-Year Average (2020-2023)
0101.00	Agriculture Technology and Sciences, General	7
0102.00	Animal Science	69
0103.00	Plant Science	25
01.0304	Crop Production	-
	Total	101

Source: Datamart and IPEDS

CCC Awards

Exhibit 10 shows the average number of awards granted by community colleges within programs historically dedicated to training for the occupations included in this report.

Exhibit 10 – CCC Awards in the South Central Coast Region, 2020-2023 Average

CCC Programs	3-Year Average
Allan Hancock	14
Cuesta	11
Moorpark	69
Ventura	7

Source: DataMart

Sources

O*Net Online, Lightcast™ Analyst, 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 Plant Science. 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.