



Labor Market Analysis for Program Recommendation Sustainable Crop Management Occupations Hartnell College

**Prepared by the San Francisco Bay Center of Excellence for Labor Market Research
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Recommendation

Based on all available data, there appears to be an “undersupply” of Sustainable Crop Management workers compared to the demand for this cluster of occupations in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito, Santa Cruz counties). There is a projected annual gap of about 1,300 students in the Bay region and 871 students in the SC-Monterey Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0103.00 Plant Science programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Hartnell College and in the region.

This report profiles Sustainable Crop Management Occupations in the 12 county Bay region and in the SC-Monterey sub-region for a proposed new program at Hartnell College.

- **Farmers, Ranchers, and Other Agricultural Managers (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).
 Entry-Level Educational Requirement: High school diploma or equivalent
 Training Requirement: None
 Percentage of Community College Award Holders or Some Postsecondary Coursework: 32%

Occupational Demand

Table 1. Employment Outlook for Sustainable Crop Management Occupations in Bay Region

Occupation	2020 Jobs	2025 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Farmers, Ranchers, and Other Agricultural Managers	12,622	12,645	23	0%	6,503	1,301	\$12	\$16
Total	12,622	12,645	23	0%	6,503	1,301	\$12	\$16

Source: EMSI 2022.1

Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Table 2. Employment Outlook for Sustainable Crop Management Occupations in SC-Monterey Sub-region

Occupation	2020 Jobs	2025 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Farmers, Ranchers, and Other Agricultural Managers	8,414	8,522	108	1%	4,361	872	\$12	\$16
Total	8,414	8,522	108	1%	4,361	872	\$12	\$16

Source: EMSI 2022.1

SC-Monterey Sub-Region includes: Monterey, San Benito, Santa Cruz Counties

Job Postings in Bay Region and SC-Monterey Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (Aug 2021 - July 2022)

Occupation	Bay Region	SC-Monterey
Farm and Ranch Managers	236	30
Aquacultural Managers	116	17
Nursery and Greenhouse Managers	82	8

Source: Burning Glass

Table 4a. Top Job Titles for Sustainable Crop Management Occupations for latest 12 months (Aug 2021 - July 2022) Bay Region

Title	Bay	Title	Bay
Cultivation Technician	45	Urban Farmer	7
Farmer	12	Gardener	6
Viticulturist	12	Manager - Retail Plant Nursery	6
Cannabis Cultivator	10	Assistant Farm Manager	5
Agrihood Farm Manager	8	Farmer Market Staff	5
Farm Manager	8	Greenhouse Manager	5
Farmer Market Vendor	8	Ranch Workforce Planner	5
Growth Marketing	8	Cell Culturing Specialist	4

Source: Burning Glass

Table 4b. Top Job Titles for Sustainable Crop Management Occupations for latest 12 months (Aug 2021 - July 2022) SC-Monterey Sub-Region

Title	SC-Monterey	Title	SC-Monterey
Cannabis Cultivator	6	Agrihood Farm Manager	3
Viticulturist	4	Farm Manager	2
Technical Grower	3	Manager, Grower Relations	2
Farmer Market Vendor	3	Substrate Technical Grower	2

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Sustainable Crop Management Workers in Bay Region

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2020)	Jobs in Industry (2025)	% Change (2020-25)	% Occupation Group in Industry (2020)
Crop Production	11,093	11,198	1%	89%
Animal Production	987	986	0%	8%
Farm Labor Contractors and Crew Leaders	101	103	2%	1%
Farm Management Services	54	52	-4%	0%
Soil Preparation, Planting, and Cultivating	53	55	2%	0%
Support Activities for Animal Production	47	46	-1%	0%
Postharvest Crop Activities (except Cotton Ginning)	49	47	-4%	0%
Support Activities for Forestry	27	37	41%	0%
Wineries	NA	NA	NA%	0%
All Other Specialty Trade Contractors	NA	NA	NA%	0%

Source: EMSI 2022.1

Table 6. Top Employers Posting Sustainable Crop Management Occupations in Bay Region and SC-Monterey Sub-Region (Aug 2021 - July 2022)

Employer	Bay	Employer	SC-Monterey
Ecological Farming Association	30	Driscolls, Inc.	7
Meadows In Bloom	27	Cannacruz	4
Deloitte	10	Fieldin	3
Little Sky Bakery	6	Samba Rock Acai Cafe	2
Syngenta	5	Monterey Mushrooms Inc.	2
Driscolls, Inc	5	International Rescue Committee	2
Bunbao Com	5	Ocean Mist Farms	1
Pacific States Marine Fisheries Commission	4	Newtown Enterprises	1
Kettlepop	4	Monterey Abalone Company	1
International Rescue Committee	4	EJ Gallo Company	1

Source: Burning Glass

Educational Supply

There is one (1) community college in the Bay Region and SC-Monterey Sub-Region issuing one (1) award on average annually (last 3 years ending 2018-19) on TOP 0103.00 Plant Science.

Table 7. Community College Awards on TOP 0103.00 Plant Science and CIP 01.0304 in Bay Region

College	Subregion	Associate Degree	Total
Cabrillo College	SC-Monterey	1	1
Total		1	1

Note: The annual average for awards is 2017-18 to 2019-20.

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 1,301 annual openings for the Sustainable Crop Management occupational cluster and one (1) annual (3-year average) award for an annual undersupply of 1,300 students. In the SC-Monterey Sub-Region, there is also a gap with 872 annual openings and one (1) annual (3-year average) award for an annual undersupply of 871 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0103.00 Plant Science

Metric Outcomes	Bay All CTE Program	Hartnell All CTE Programs	State 0103.00	Bay 0103.00	SC-Monterey 0103.00	Hartnell 0103.00
Students with a Job Closely Related to Their Field of Study	74%	66%	64%	56%	N/A	N/A
Median Annual Earnings for SWP Exiting Students	\$47,419	\$92,128	\$28,900	\$41,187	\$38,260	\$38,260
Median Change in Earnings for SWP Exiting Students	23%	5%	34%	36%	43%	43%
Exiting Students Who Attained the Living Wage	52%	73%	52%	52%	55%	55%

Source: Launchboard Strong Workforce Program Median of 2017 to 2020.

Skills and Education

Table 9. Top Skills for Sustainable Crop Management Occupations in Bay Region (Aug 2021 - July 2022)

Skill	Posting	Skill	Posting
Lifting Ability	68	Irrigation Systems	21
Cleaning	57	Occupational Health and Safety	20
Farm Management	54	Plant Biology	19
Budgeting	53	Record Keeping	19
Repair	47	Customer Contact	18
Scheduling	41	Fertilizers	18
Customer Service	40	Purchasing	18
Staff Management	33	Spreadsheets	18
Project Management	31	Product Sales	16
Sales	29	Vaccination	16
Data Collection	25	Water Quality	16
Experiments	25	Ventilation	15
Social Media	25	Chemistry	14
Biology	21	Disease Control	14

Source: Burning Glass

Table 10. Education Requirements for Sustainable Crop Management Occupations in Bay Region

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	82	43%
Associate's degree	7	4%
Bachelor's degree and higher	101	53%

Source: Burning Glass

Methodology

Occupations for this report were identified by use of skills listed in O*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCCO Data Mart.

Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)
CTE LaunchBoard www.calpassplus.org/Launchboard/
Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
Chancellor's Office MIS system

Contacts

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