



Master Grower Occupations Labor Market Information Report Diablo Valley 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 Master Grower workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda, Contra Costa counties). There is a projected annual gap of about 10,421 students in the Bay region and 259 students in the East Bay Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0109.30 - Nursery Technology 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 Diablo Valley College and in the region.

This report profiles Master Grower Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Diablo Valley 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%
- **Farmworkers and Laborers, Crop, Nursery, and Greenhouse (45-2092):** 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. Excludes “Graders and Sorters, Agricultural Products” (45-2041) and “Forest, Conservation, and Logging Workers” (45-4011 through 45-4029).
Entry-Level Educational Requirement: No formal educational credential
Training Requirement: Short-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 14%

Occupational Demand

Table 1. Employment Outlook for Master Grower Occupations in Bay Region

Occupation	2019 Jobs	2024 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	10,705	10,690	-15	-0%	5,565	1,113	\$ 20.05	\$ 40.51
Farmworkers and Laborers, Crop, Nursery, & Greenhouse	53,466	55,556	2,090	4%	46,625	9,325	\$ 12.63	\$ 14.25
Total	64,171	66,246	2,075	3%	52,190	10,438	\$13.87	\$18.63

Source: EMSI 2020.4

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 Master Grower Occupations in East Bay Sub-region

Occupation	2019 Jobs	2024 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	333	348	15	5%	191	38	\$ 18.73	\$ 49.08
Farmworkers and Laborers, Crop, Nursery, & Greenhouse	1,346	1,373	27	2%	1,152	230	\$ 13.58	\$ 17.14
Total	1,679	1,721	42	3%	1,343	268	\$14.60	\$23.47

Source: EMSI 2020.4

East Bay Sub-Region includes: Alameda, Contra Costa Counties

Job Postings in Bay Region and East Bay Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (Dec 2019-Nov 2020)

Occupation	Bay Region	East Bay
Farmworkers and Laborers, Crop	175	24
Farm and Ranch Managers	142	19
Aquacultural Managers	62	22
Nursery and Greenhouse Managers	56	8
Nursery Workers	12	3

Source: Burning Glass

Table 4a. Top Job Titles for Master Grower Occupations for latest 12 months (Dec 2019-Nov 2020)

Bay Region

Title	Bay	Title	Bay
Picker	26	Operator, Equipment II	6
Cultivation Technician	17	Farm Owner	6
Growth Marketing	11	Cultivator	6
Farm Manager	10	Cannabis Cultivator	6
Harvest Cellar	9	Nursery Manager	5
Grower	9	Greenhouse Worker	5
Greenhouse Manager	9	Greenhouse Technician	5
Viticulturist	8	Viticulturist - The Ranch	4
Horticulturist	8	Marketeer At Farmer Markets	4

Source: Burning Glass

Table 4b. Top Job Titles for Master Grower Occupations for latest 12 months (Dec 2019-Nov 2020)**East Bay Sub-Region**

Title	East Bay	Title	East Bay
Picker	13	Farm Laborer	2
Cultivation Technician	9	Wind Farm Manager	1
Greenhouse Worker	3	Urban Farmer	1
Cannabis Cultivation Technician	3	Tenders	1
Ra-Cell Culturing	2	Technical Specialist, Sustainable Seafood Fisheries	1
Marketeer At Farmer Markets With Vie	2	Store Ranch Member	1
Laboratory Assistant Fish Culturist	2	President, Local Operation Loc Coldwell	1
Farmer's Market Seller	2	President, Local Operation	1
Farmer Market Vendor	2	President Local Operation	1

Source: Burning Glass

Industry Concentration**Table 5. Industries hiring Master Grower Workers in Bay Region**

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2024)	% Change (2019-24)	% Occupation Group in Industry (2019)
Crop Production	21,364	21,108	-1%	33%
Farm Labor Contractors and Crew Leaders	20,650	22,258	8%	33%
Postharvest Crop Activities (except Cotton Ginning)	9,640	10,391	8%	15%
Farm Management Services	2,347	2,317	-1%	4%
Crop Harvesting, Primarily by Machine	1,810	1,775	-2%	3%
Animal Production	1,432	1,398	-2%	2%
Soil Preparation, Planting, and Cultivating	1,381	1,482	7%	2%
Wineries	1,330	1,322	-1%	2%
Nursery, Garden Center, and Farm Supply Stores	472	453	-4%	1%
Temporary Help Services	390	386	-1%	1%

Source: EMSI 2020.4

Table 6. Top Employers Posting Master Grower Occupations in Bay Region and East Bay Sub-Region (Dec 2019-Nov 2020)

Employers	Bay	Employer	East Bay
Deloitte	11	Meadows In Bloom	5
Constellation Brands Incorporated	10	Schnitzer Steel Industries	3
University California	6	Anheuser-Busch Companies, Inc.	3
Trincher Family Estates	6	Vangst	2
Pepperidge Farm	6	University California	2
Meadows In Bloom	6	Scs Global Services	2
Lawrence Berkeley Lab	6	Realogy Franchise Group LLC	2
Schnitzer Steel Industries	5	Nug, Inc	2
Speedling Incorporated	4	Kite Hawk Farms	2

Employers	Bay	Employer	East Bay
Restaurant Depot	4	Fresh Farm Aquaponics	2
Jetro Holdings, Llc	4	El Porteno Empanadas	2
Gothic Landscape Incorporated	4	Dale Hardware	2
Emerald Peak	4	Acepix Biosciences	2
University Of California Santa Cruz	3	105Th Management	2

Source: Burning Glass

Educational Supply

There are five (5) community colleges in the Bay Region issuing 17 awards on average annually (last 3 years ending 2018-19) on TOP 0109.30 - Nursery Technology. In the East Bay Sub-Region, there are two (2) community colleges that issued 9 awards on average annually (last 3 years) on this TOP code.

Table 7. Community College Awards on TOP 0109.30 - Nursery Technology in Bay Region

College	Subregion	Associate	Certificate Low	Total
Cabrillo	SC - Monterey	0	4	4
Diablo Valley	East Bay	0	5	5
Merritt	East Bay	2	2	4
San Francisco	Mid-Peninsula	1	1	2
Santa Rosa	North Bay	1	1	2
Total		4	13	17

Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 10,438 annual openings for the Master Grower occupational cluster and 17 annual (3-year average) awards for an annual undersupply of 10,421 students. In the East Bay Sub-Region, there is also a gap with 268 annual openings and 9 annual (3-year average) awards for an annual undersupply of 259 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0109.30 - Nursery Technology

2017-18	Bay All CTE Program	Diablo Valley All CTE Program	State 010930	Bay 010930	East Bay 010930	Diablo Valley 010930
% Employed Four Quarters After Exit	67%	60%	NA	NA	NA	NA
Median Quarterly Earning Two Quarters After Exit	\$11,466	\$8,979	\$6,073	NA	NA	NA
Median % Change in Earning	31%	35%	25%	NA	NA	NA
% of Students Earning a Living Wage	53%	39%	43%	NA	NA	NA

Source: Launchboard Pipeline (version available on August 2020)

Skills, Certifications and Education

Table 9. Top Skills for Master Grower Occupations in Bay Region (Dec 2019-Nov 2020)

Skill	Posting	Skill	Posting
Repair	63	Customer Service	26

Skill	Posting	Skill	Posting
Cleaning	61	Equipment Maintenance	26
Forklift Operation	55	Biology	24
Scheduling	53	Record Keeping	24
Lifting Ability	51	Staff Management	24
Budgeting	39	Farm Management	21
Fertilizers	39	Quality Management	21
Quality Assurance and Control	35	Spreadsheets	21
Basic Mathematics	30	Machinery	20
Data Collection	30	Oral Irrigation	20
Project Management	30	Irrigation Systems	18
Experiments	29	Marketing	18
Packaging	28	Food Safety	17
Sales	28	Plant Biology	17

Source: Burning Glass

Table 10. Certifications for Master Grower Occupations in Bay Region (Dec 2019-Nov 2020)

Certifications	Posting	Certifications	Posting
Driver's License	109	Security Clearance	1
First Aid Cpr Aed	6	OSHA Safety 10 Hour	1
Certified Pest Control	5	Neonatal Resuscitation Program (NRP)	1
Real Estate Certification	3	Licensed Financial Professional	1
OSHA Forklift Certification	3	Food Handler Certification	1
CDL Class A	3	Certified Animal Laboratory Technician	1
Water Safety Instructor	2	American Heart Association Certification	1
Food Service Certification	2	American Association For Laboratory Animal Science (AALAS)	1
Contractors License	2	OSHA Safety 10 Hour	1

Source: Burning Glass

Note: 72% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

Table 11. Education Requirements for Master Grower Occupations in Bay Region (Dec 2019-Nov 2020)

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	80	49%
Associate's degree	7	4%
Bachelor's degree	75	46%
Master's degree	2	1%

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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